



1978-79

Rush  
University

Presbyterian-  
St. Luke's  
Hospital

# Graduate Medical Education Rush-Presbyterian- St. Luke's Medical Center



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Hospital

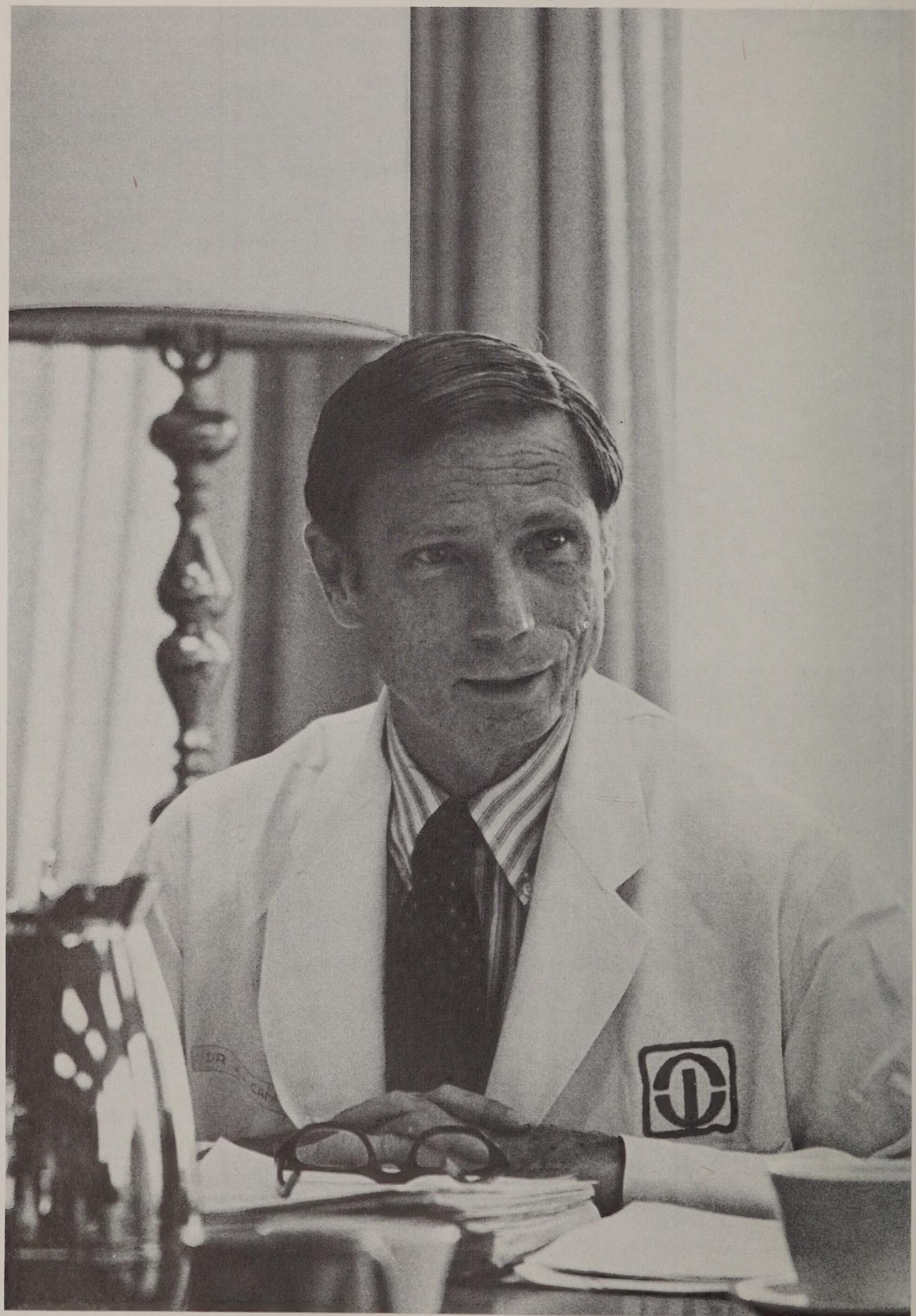
# Graduate Medical Education Rush-Presbyterian- St. Luke's Medical Center

Office of Graduate and Continuing  
Medical Education  
Rush-Presbyterian-St. Luke's  
Medical Center  
600 South Paulina Street  
Chicago, Illinois 60612

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and Behavioral  
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and Services**

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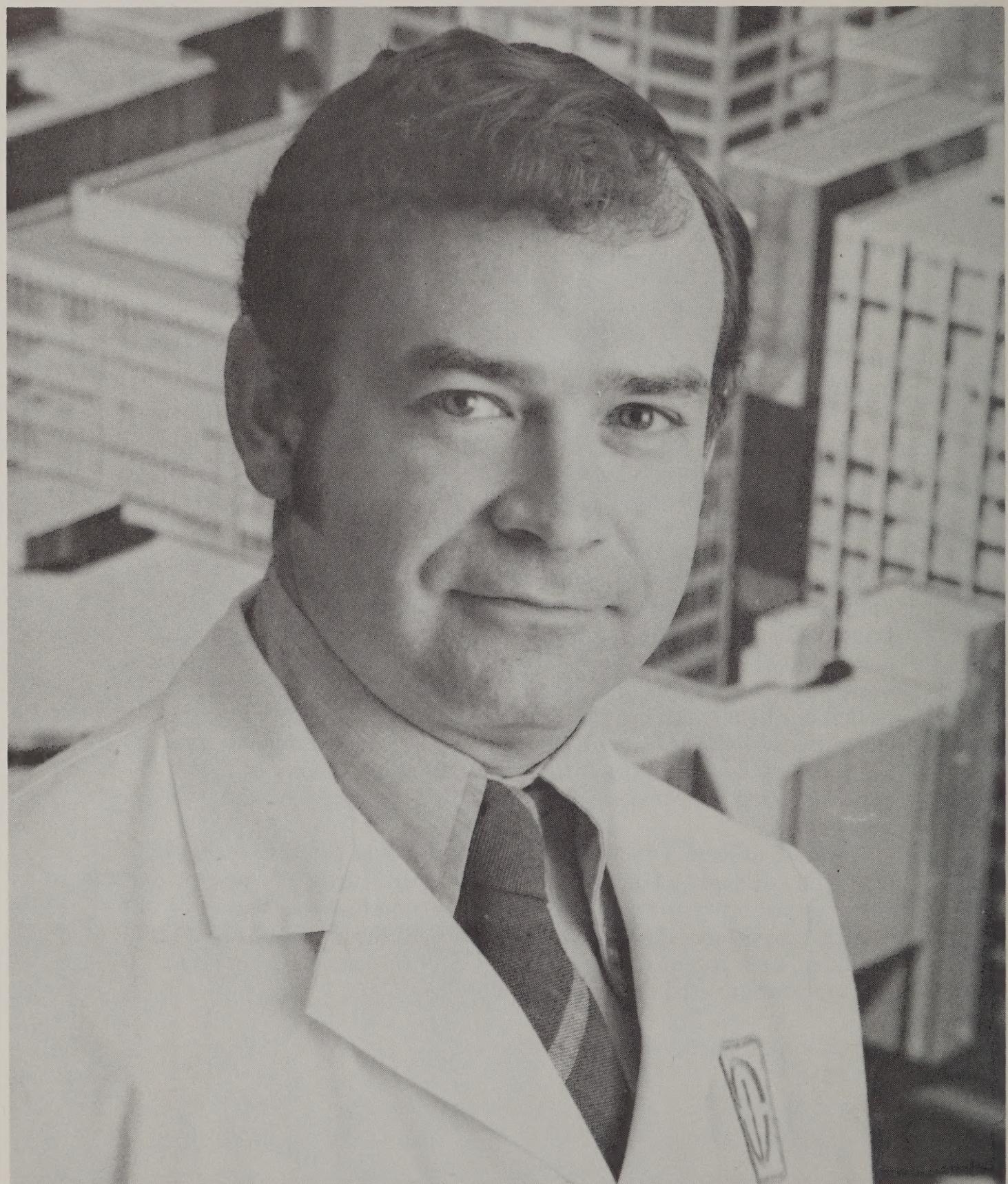
The concept of an academic health center has gained recognition throughout the United States as an important organizing principle for patient services, medical education, and scientific inquiry. At Rush-Presbyterian-St. Luke's Medical Center, our approach in the development of such a center is based on a commitment for orderly and balanced growth among all the components—patient care, education, and research.

The Graduate Medical Education program arises out of the strengths of these components. With all of them, it finds its purpose, justification, and direction in the priority we place on patient care. The emphasis comes from the long tradition of the original individual institutions, potentiated by their most recent combination a decade ago. We believe with Francis Weld Peabody that "the secret of care of the patient is in caring for the patient," and we agree that "without scientific knowledge a compassionate wish to serve mankind's health is meaningless, but scientific knowledge without wisdom and compassion is a frozen storehouse."

At Rush-Presbyterian-St. Luke's, the stature of the medical staff and faculties expresses our standards of what we like to call "physician-ship." These are the qualities by which humane and principled men and women put knowledge and understanding, science and skills to use. To harbor ambitions to produce good doctors carries us deep into the enigma of character formation. Our observation tells us that our house staff has had more than a disciplined experience in education. Whatever we do in education, it is clear that the power of example is one of the surest forces for elevating the quality of perception and performance to the standards we set, assay, and seek anew.

As house officers, you will develop confidence in your knowledge of health and disease and in your strengths in special areas of concern, yet you must bring to a new level of appreciation the sense that each patient is a person whose wholeness transcends the immediate physical problem. Your responsibility is to grow. Our responsibility here is to nurture your growth in every way that we can.

James A. Campbell, M.D.  
*President*



The unique relationships that Rush house staff enjoy with Rush faculty and Rush Medical College students make these programs in graduate medical education distinctive. A long tradition of excellence in graduate medical education has carried with it a tradition of mutual respect that characterizes the aforementioned relationships. Having served an internship, residency, and fellowship at Presbyterian-St. Luke's Hospital, I have had the opportunity to experience this educational setting from various viewpoints. It is a privilege to be in a position of responsibility for this graduate medical education setting from an administrative point of view and to continue my association with it as a teacher and student.

The dual role of our house staff as continuing students of medicine and as faculty participants in the teaching of medicine is stimulating. This role is carried through by the attending faculty as well, for they see themselves in both capacities.

Throughout the Rush system quality of patient care is the ultimate goal. Excellence in teaching and learning is augmented by that goal and by the rich mix of patient populations in our health care facilities. Opportunities for research are present in each of the graduate medical education programs and are encouraged.

Rush, more than anything else, is its people. Our quality is set forth in goals, but lives in the students, house staff, faculty, and management, all of which have the same common denominator: people. Individuality in learning, participation, maturation, and growth characterize the programs in graduate medical education.

Society has called for response from the health care industry and Rush has done so by establishing, on an institutional level, an identity and a direction with clear definition. The Rush system is one characterized by responsibility for total health care needs for a defined population of 1.5 million people. The system extends broadly both geographically and in types of health care settings and is managed for flexibility and responsiveness to population needs. The institution, not just a particular program, is exciting—we see ourselves as leaders in the private sector. We invite you to join us.

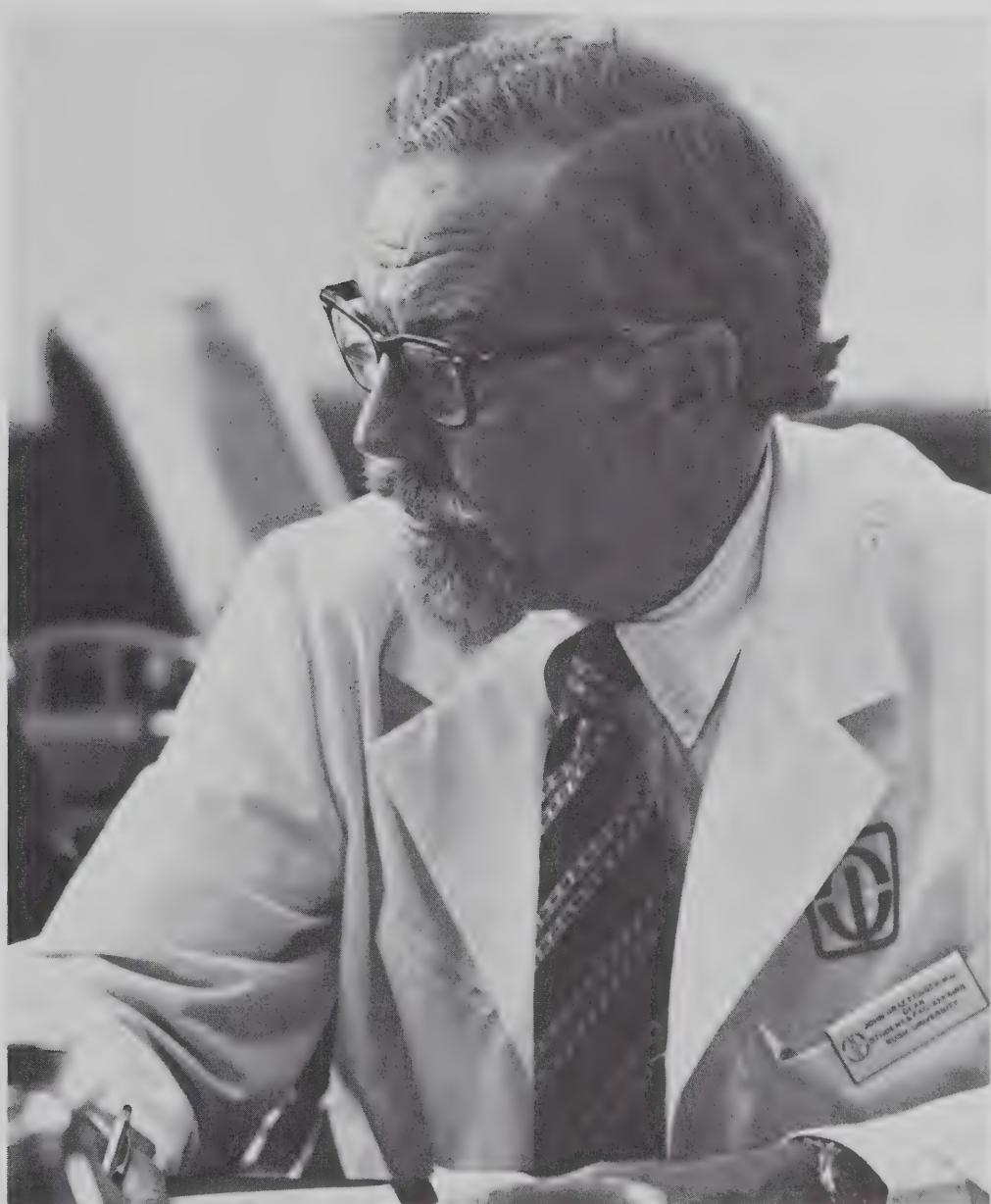
Leo M. Henikoff, M.D.  
*Vice President, Medical Affairs and  
Dean, Rush Medical College, acting.*

The goal of our graduate medical education program is to provide the new physician an environment in which a high level of professional competence can be developed. While the goal is fixed, there must be a high degree of flexibility involved in the program that is the path to that goal.

At Rush-Presbyterian-St. Luke's we recognize the inseparable relationship between first-rate practice and learning. The good physician must be expert in the acquisition as well as the application of knowledge and skills. We also recognize that there have been major changes in medical education on the one hand and in the expectations of those who have a right to sound health on the other. Education and training for a career of professional competence are designed to take these changes into account, and to respond to other significant changes as they occur. The departments establish the details of their training programs according to the requirements of the various specialties. The Office of Graduate and Continuing Medical Education coordinates the programs in light of the over-all goals, and maintains a continuing process of evaluation and re-evaluation. The Office also provides centralized services to residents and fellows for those details common to all, such as stipends, housing, and insurance.

Graduate medical education at Rush-Presbyterian-St. Luke's will continue to be responsive to the needs of new physicians striving to exercise their growing abilities with knowledge and compassion. We will appreciate your insights into a process that must constantly adapt if we are to reach a goal that must never change, the education of highly competent and effective physicians.

John S. Graettinger, M.D.  
*Director of Graduate Medical Education  
and Dean of Faculty Affairs, Rush University*





An aerial black and white photograph of a city skyline. In the foreground, several modern skyscrapers with grid-like window patterns are visible. A large, open green space with trees and a small building is situated between the buildings. The city extends into the distance with more buildings and roads.

The  
Medical  
Center

## Introduction

Rush-Presbyterian-St. Luke's Medical Center offers training in 19 clinical departments and seven basic science departments to some 290 residents, trainees, and fellows each year. An additional clinical program is being developed in the newly established Department of Family Practice.

Presbyterian-St. Luke's Hospital provides the major clinical base for graduate medical education; other hospitals affiliated with Rush University offer additional and supplemental opportunities. The 575 voluntary physicians on the attending staff of Presbyterian-St. Luke's Hospital are also faculty members of Rush University, as are many of the attending physicians and surgeons at Medical Center affiliates; the faculty of the University includes some 1,300 clinicians and scientists. The Professional Building on the Medical Center campus provides private office space for members of

the attending staff; postgraduate training may include opportunities to follow patients there.

In order to offer a broader range of clinical experiences, the Medical Center also draws upon a network of resources that includes contractual affiliations with nine hospitals and health centers in northern Illinois, and cooperative educational programs with 14 colleges and universities throughout the Midwest. Many of the Medical Center graduate programs offer rotation through one or more affiliated hospitals that are located in rural and semirural areas, suburbs, and a variety of urban situations. \*

Presbyterian-St. Luke's Hospital itself is both a major referral center and a community resource; patients come from all parts of the metropolitan area and the nation, and from all economic and social strata.

## History

The College of Health Sciences	1975
Rush University	1972
The College of Nursing	1972
Rush-Presbyterian-St. Luke's Medical Center	1969
Presbyterian-St. Luke's Hospital	1956
Presbyterian Hospital	1883
St. Luke's Hospital	1864
Central Free Dispensary	1871
Rush Medical College	1837

## Programs in Graduate Medical Education

The programs offered in graduate medical education and the minimum requirements for Specialty Board eligibility are outlined in the accompanying diagram. In the subspecialties that require a year or more in a broad specialty as a prerequisite, programs for the entire sequence may be planned through the Departments in the Offices of Medical or of Surgical Sciences and Services. All GME-1 positions are offered through the National Intern-Resident Matching

Program. The Family Practice residencies are offered as separate programs in four of the Rush-affiliated hospitals. Separate programs in various other specialties are also offered at the Mount Sinai Hospital Medical Center and at Christ and West Suburban Hospitals of the Rush network, under the supervision of Rush faculty members.

\*Residents in Family Practice and other programs based at affiliated hospitals also rotate through Presbyterian-St. Luke's.

## **Departments**

The activities of the various basic science and clinical disciplines are carried out by the departments at Rush-Presbyterian-St. Luke's Medical Center. The departments are grouped into three offices: Biological and Behavioral Sciences and Services, Medical Sciences and Services, and Surgical Sciences and Services.

Each department is responsible for participation in the health care activities of the Medical Center and for educational programs for health professionals at the undergraduate, graduate, and continuing levels; each is expected to encourage and conduct research. In the following

pages, each department has described its activities.

The educational programs in the departments in Biological and Behavioral Sciences and Services are directed primarily to undergraduate medical and nursing students and to graduate students, but there are also programs for house officers. In the clinical departments, first-year graduate medical education programs are offered via the NIRMP in the major clinical specialties, and advanced programs, residencies, and fellowships are offered in all of the clinical specialties and subspecialties.

## **Facilities**

Rush-Presbyterian-St. Luke's Medical Center is located in Chicago in the northeast corner of the 350-acre Medical Center District of the State of Illinois. It currently comprises 18 buildings, including Presbyterian-St. Luke's Hospital, the Marshall Field IV psychiatric outpatient building, research facilities, apartment buildings, and the Laurence Armour Day School for children of employees and students. The 192,000 square foot academic facility, which was completed in 1976, accommodates large class and laboratory activities, small group seminars, individual tutoring, and faculty offices and houses the Rush University Library, the oldest medical library in the city of Chicago. The library houses approximately 70,000 volumes, subscribes to 750

periodicals, borrows documents and volumes through interlibrary loan, and processes Medlars and Medline requests. The library also has an outstanding collection of rare medical books available for research. The Academic Facility has direct internal access to the Professional Building and to other patient care and research facilities.

Neighboring institutions within the Medical Center district include the University of Illinois Medical Center, Hektoen Institute, the Cook County Hospital and its Graduate School of Medicine and School of Nursing, the West Side Veterans Administration Hospital, the State of Illinois Public Health Laboratory, and the Illinois State Psychiatric Institute. Various Rush departments maintain vigorous cooperative programs with many of these institutions.

## **The Johnston R. Bowman Health Center for the Elderly**

The Johnston R. Bowman Health Center for the Elderly provides short-term restorative care, comprehensive ambulatory services, residential apartments, and the clinical setting for professional training in gerontology and geriatrics.

The 176-bed Bowman Center is devoted entirely to care of the elderly and was specifically designed for hospital-level care of the

aged patient. It offers a wide range of services to the elderly through its outpatient facility or through in-patient services for those admitted from the community, or transferred from other acute care facilities or from Presbyterian-St. Luke's Hospital. The primary goal of the program is restorative care and rehabilitation. The top two floors contain residential apartments for independent elderly.

**Sheridan  
Road  
Pavilion**

The Sheridan Road Pavilion is a 178-bed hospital on the north side of Chicago, offering internal medicine, surgery, and psychiatric services including an alcohol rehabilitation service. The hospital operates as an integral part of the Medical Center, with the same policies, procedures, programs, and medical staff. Rush is the first academic medical center in the nation to augment its main medical complex with a "branch hospital."

House staff members of all three services are assigned on a rotation basis to the Sheridan Road Pavilion. Medical and nursing students are also regularly assigned for clinical experiences.

For certain unusual procedures, such as computerized tomography, patients are transported to Presbyterian-St. Luke's Hospital for the procedure. This allows cost-effective use of expensive facilities.

**Patient Care  
at the Medical  
Center**  
*(Fiscal year ended  
June 30, 1977)*

Bed capacity (excluding bassinets)	864
Total admissions (including newborns)	27,306
Total days care of patients (including nursery)	275,960
Average length of stay (adult and pediatric)—days	10.1
Occupancy (excluding nursery)	84.9%
Acute care visits	11,976
Emergency Room visits	25,431
Operations performed	14,000
Blood transfusions	24,351

**Faculty and Staff**

Rush Medical College	1,300
College of Health Sciences	175
College of Nursing	129
Attending physicians	575
Total employees	5,472

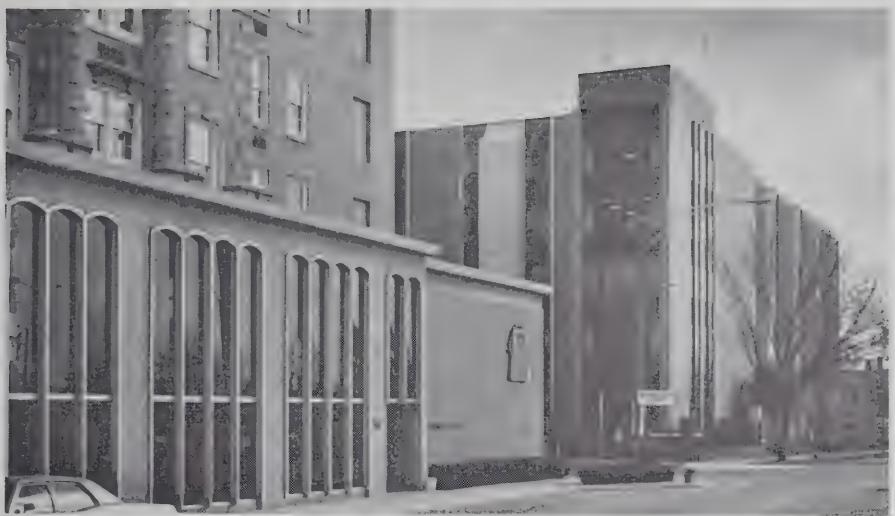
**Students**

Medical students	421
Nursing students	303
Health Science students	61
Interns, residents, and fellows	291

**Research**

Opportunities are available for house officers to work on M.S. and Ph.D. programs in conjunction with their graduate medical education. Approximately five percent of the current budget of the Medical Center is devoted to research, and the proportion is growing. The commitment has involved annual expenditures in the area of \$5.3 million, funded by private agencies, foundations, corporations, federal and state agencies, and individuals.

The structure of the Medical Center includes a number of interdisciplinary committees for patient care, in which physicians, surgeons, basic scientists, psychologists, and nurses develop integrated therapies for patients with diseases such as multiple sclerosis and rheumatoid arthritis. The interdisciplinary approach also informs the research areas, especially in the approaches to cancer, cardiovascular diseases, and orthopedics. House staff



## CHARLES H. AND SCHWAB REHABILITATION



## **Research . . .**

members are encouraged to take an active role in the continuing exchange of information and insight.

### **Research Projects**

Research projects in progress	540
Research publications	450
Research awards, 1975-76	\$5,267,000

### **The Rush University System for Health**

The Rush University System for Health is a prototype model developed to provide all levels of health care for 1.5 million people, to educate and train the requisite health professionals to repopulate the system, and to support basic and applied research that will enhance the health care of the future. Its traditions began with Rush Medical College, which graduated over 10,000 physicians from its founding in 1837 until it suspended activities in 1942. The graduates and the faculty of Rush played the major roles in the establishment of the medical schools of both Northwestern University and the University of Chicago. In the late 19th century, at the urging of the Rush faculty, the Presbyterian Hospital was founded as the first voluntary hospital in the country built for the patients and students of a medical faculty and, in 1958, a merger was consummated with another major, community based hospital, St. Luke's, to form Presbyterian-

St. Luke's Hospital. The merger established a broader and more efficient patient care base, permitted expansion of programs in graduate medical education, made possible a leading role in the education of undergraduate medical students from the neighboring state university, and the broadening of activities in research. In 1969, an incorporation joined the charters of the Medical College and Hospital into Rush-Presbyterian-St. Luke's Medical Center. The Medical College admitted students in 1971 and was rapidly followed by the College of Nursing and the College of Health Sciences, which grant professional degrees to the doctor of science level, and by the graduate school, which accepted candidates for the Ph.D. degree in 1977. Concurrently, educational and clinical networks have been established by affiliation agreements.

### **Clinical Network**

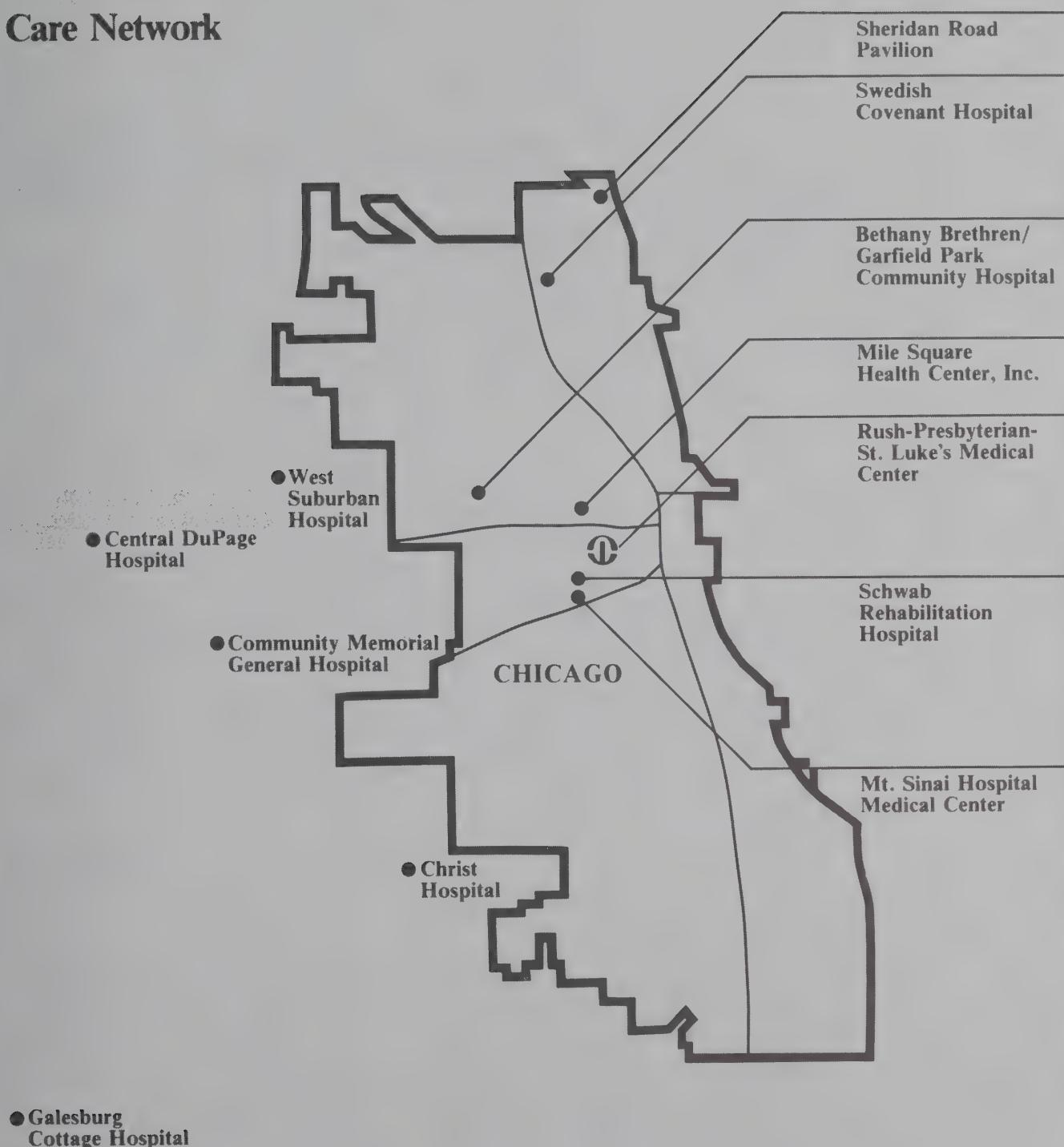
The clinical network consists of cooperative programs with 9 health care institutions in different types of locations throughout the city and in suburban, semi-rural, and rural areas.

This network system, which provides health care for 1.5 million people in all types of environments, also has been designed to serve as the educational environment for the health professional students at Rush and provides an environment for research at all levels of health care.

Programs in undergraduate medical education have been developed in association with neighboring Mount Sinai Hospital Medical Center. In addition, joint programs in nursing and graduate medical education are being developed. Mount Sinai Hospital Medical Center provides outpatient and inpatient services to a broad metropolitan population.

Other clinical affiliates throughout northern Illinois also help to provide access for patients to all levels of care; they offer a

## Care Network



## Clinical Network . . .

broad base for clinical research and enhance the promulgation of new ideas as well as a significant exchange of educational opportunities. Staff members of affiliated hospitals share in teaching residents and medical students and participate in the continuing education programs of the Medical Center as faculty members of Rush. Residents rotating through affiliated hospitals experience the complete range of medical needs in their specialty, and gain insight into the different needs of different communities.

In addition to Presbyterian-St. Luke's Hospital, including its Sheridan Road Pavilion, the Johnston R. Bowman Health Center for the Elderly, and the other facilities at the Medical Center, the clinical network consists of:

## Academic Network

The educational network consists of cooperative programs in 14 colleges and universities from Colorado to Tennessee. These colleges and universities help to provide the health manpower needed to make the system work for the good of the patient, on an economically sound base and in a setting that enhances the humanistic aspects of health care training. Students admitted to these colleges with an interest in nursing or other health professions may begin their studies on the campus of an affiliated college and move to the Medical Center in their third or fourth year to complete professional training for the Bachelor, Master, or Doctor of Science degree. Special programs in two of the colleges, Knox and Grinnell, allow students admitted to the Medical College to combine their last year of college with their first year of medical training on the campus of the affiliated college. The educational affiliates are:

Beloit College  
Beloit, Wisconsin

Mount Sinai Hospital Medical Center Chicago (479 beds)  
Bethany Brethren/Garfield Park Community Hospital Chicago (197 beds)  
Central DuPage Hospital Winfield (237 beds)  
Christ Hospital Oak Lawn (809 beds)  
Community Memorial General Hospital La Grange (237 beds)  
Galesburg Cottage Hospital Galesburg (234 beds)  
Swedish Covenant Hospital Chicago (235 beds)  
West Suburban Hospital Oak Park (267 beds)  
Mile Square Health Center Chicago, an outpatient facility with over 20,000 patients registered

Carleton College Northfield, Minnesota  
Coe College Cedar Rapids, Iowa  
The Colorado College Colorado Springs, Colorado  
Cornell College Mount Vernon, Iowa  
Fisk University Nashville, Tennessee  
Grinnell College Grinnell, Iowa  
Illinois Institute of Technology Chicago, Illinois  
Knox College Galesburg, Illinois  
Lake Forest College Lake Forest, Illinois  
Lawrence University Appleton, Wisconsin  
Macalester College St. Paul, Minnesota  
Monmouth College Monmouth, Illinois  
Ripon College Ripon, Wisconsin

## **Graduate Medical Education**

The first year programs and positions in graduate medical education at Rush are shown in the table. Integrated programs have thus far been established in Obstetrics and Gynecology and in Orthopedic Surgery. Other integrated programs are being developed. In all types of programs the inter-relationships and rotations between the program at Presbyterian-St.Luke's Hospital

and the other hospitals are described in the various departmental descriptions that follow.

Full descriptions of the programs based in the clinical affiliates are available from each of the hospitals or from the Office of Graduate and Continuing Medical Education at the Medical Center.

## **For Further Information**

Office of Graduate and  
Continuing Medical Education  
Rush-Presbyterian-St. Luke's  
Medical Center  
600 South Paulina Street  
Chicago, Illinois 60612  
312/942-5495

Office of Graduate  
Medical Education  
Mount Sinai Hospital  
Medical Center  
California at 15th Street  
Chicago, Illinois 60608  
312/542-3603

Director of  
Medical Education  
Christ Hospital  
4440 West 95th Street  
Oak Lawn, Illinois 60453  
312/425-8000

Director, Community  
Family Practice Center  
Community Memorial  
General Hospital  
5101 Willow Springs Road  
LaGrange, Illinois 60525  
312/352-7470

Director, Family Practice  
Residency Program  
Swedish Covenant Hospital  
5145 North California Avenue  
Chicago, Illinois 60625  
312/878-8200

Director of Medical Education  
West Suburban Hospital  
518 North Austin Blvd.  
Oak Park, Illinois 60302  
312/383-6200





The  
House Officer  
at Rush-  
Presbyterian-  
St. Luke's

## The Agreement

The preamble to the 1977 contract developed by officers of the House Staff Association and members of the Medical Center administration establishes their common understanding:

"The terms of this agreement recognize that it is in the best interests of the public and the Medical Center's patients to assure the performance of the respective obligations of the parties, that provision of the highest possible quality of health care along with supervised graduate medical education is the first priority of the parties, that there is a need for flexibility within the working relationship of the parties, and that a fair and frank understanding of the rights and responsibilities of both parties is important at the onset of and throughout their relationship. . . ."

Each house officer is free to negotiate modifications in the basic contract, which has a one-year term.

In addition to terms for compensation and benefits, which will be discussed below, the basic contract also provides that:

- appointment as a house officer

carries with it an appointment in Rush Medical College of Rush University

- house officers will receive semi-annual written evaluations of performance from department chairmen and will in turn provide their own written evaluations of their program twice a year
- there will be additional compensation when house officers are on in-hospital call more than an average of 10 nights per month
- an elected House Staff Council will meet regularly to discuss and recommend improvements in the Graduate Medical Education Program
- there is a formal grievance procedure, with provision for hearing and appeal.

The contract recognizes that while the House Staff Association has acted on behalf of its members, the Association is not a formal bargaining agent within the meaning of the National Labor Relations Act. House officers are eligible to be members of the Association, but membership is not required.

## Stipends and Benefits

House staff stipends for 1977-78 are as follows:

First year post-M.D.	14,252
Second year post-M.D.	15,029
Third year post-M.D.	15,785

Fourth year post-M.D.	16,770
Fifth year post-M.D.	17,477
Sixth year post-M.D.	18,318
Seventh year post-M.D.	19,160
Eighth year post-M.D.	20,064

## Other Benefits include:

- Individual and family outpatient coverage in Blue Shield or the Anchor Organization for Health Maintenance Plan, at nominal monthly rates.
- Individual and family coverage in Blue Cross at no charge.
- Professional liability insurance for Medical Center-related activities.
- Disability insurance and workmen's compensation.
- Voluntary participation in Medical Center-approved tax sheltered annuity programs.
- Professional courtesy on drugs

from the Medical Center pharmacy for house officers and their immediate families.

- Uniforms provided and maintained at no cost.
- Parking privileges.
- Housing as available in Medical Center apartments.
- Participation in Medical Center retirement income plan at no cost.
- Three weeks vacation with pay.
- Maternity leave, Armed Services Reserve duty leave, and educational leaves as mutually agreed with department chairmen.

## *Other Benefits . . .*

- Customary lodging and meal reimbursement while on call.
- Free life insurance.
- Free physical examinations.
- Assistance, where appropriate, in licensure, housing, placement, and application for individual specialty board requirements.
- Participation in Medical Center tuition reimbursement program.

## **The House Staff Association**

The House Staff Association is a membership organization. Officers for 1977-78 are:

**Alan M. Sadove, M.D.**  
*(General Surgery), President*  
**Everett R. Knight, M.D.**  
*(Internal Medicine), Vice President*  
**Dino S. Delicata, M.D.**  
*(General Surgery), Secretary*  
**Martin Siglin, M.D.**  
*(Internal Medicine), Treasurer*  
**Anthony W. Savino, M.D.**  
*(Orthopedic Surgery), Social Chairman*

The executive committee meets monthly and there are periodic general assemblies. The

Association provides house staff representatives for a number of Medical Center-wide faculty and medical staff committees, including Student Affairs, Admissions, Graduate Medical Education, the Hospital Committee on Research, the Hospital Utilization Review Committee, the Joint Accreditation Committee, and a variety of area committees such as Infectious Disease and Aseptic Control.

The House Staff Association Executive Committee voted in June, 1975, to join the National Physicians House Staff Association.

## **Housing**

The Medical Center maintains a limited number of apartments on campus, and there are unfurnished apartments ranging from efficiency to two-bedroom within walking distance. In addition, the city and suburbs offer a diversity of housing and life styles. Because the Medical Center is located just slightly to the west of downtown Chicago, it is within comfortable commuting

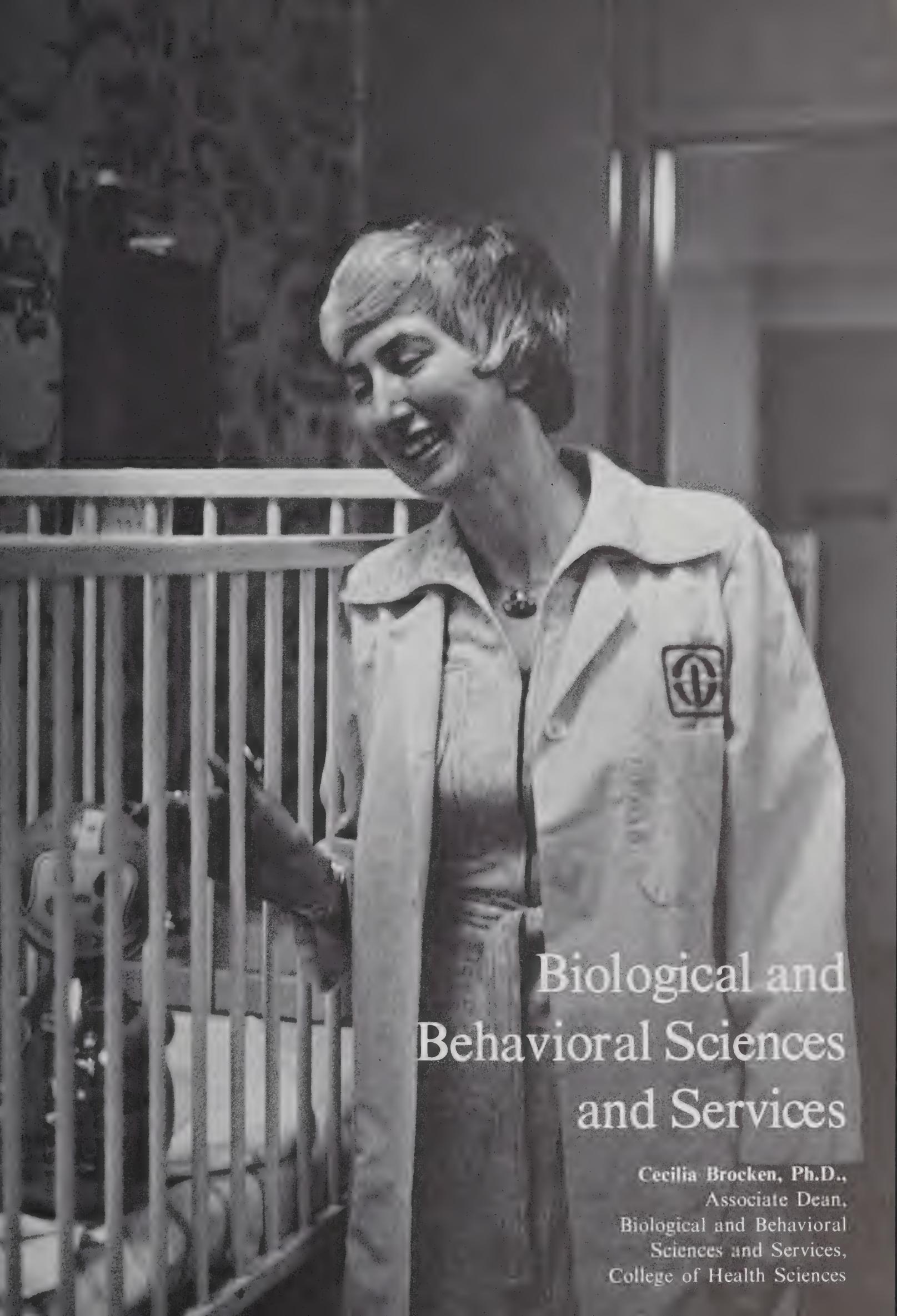
distance, half an hour or so, of all areas of the city and most adjacent suburbs. Apartments on campus are within 15 minutes of the cultural, shopping, and recreational activities of Chicago's Loop, the parks and beaches along Lake Michigan, and the intellectual, cultural, and social resources of the entire city.

## **For Further Information**

The Office of Graduate and Continuing Medical Education coordinates all the post-M.D. educational programs, maintaining a continuous process of evaluation and re-evaluation. The office also provides centralized service to house officers and trainees for questions regarding stipends, housing, insurance, and related matters.

Contact:  
Office of Graduate and Continuing Medical Education  
Rush-Presbyterian-St. Luke's Medical Center  
600 South Paulina Street  
Chicago, Illinois 60612  
312/942-5495





# Biological and Behavioral Sciences and Services

Cecilia Brocken, Ph.D.,  
Associate Dean,  
Biological and Behavioral  
Sciences and Services,  
College of Health Sciences

## Departments

The College of Health Sciences includes among its charges that of providing instruction in the basic sciences to students in all colleges of Rush University. The College of Health Sciences also sees itself as providing a base of support for all learning experiences in our Medical Center.

The departments in the college's Office of Biological and Behavioral Sciences and Services have formal educational programs directed primarily to undergraduate medical and nursing students. However, some of these departments offer house officer programs and, of equal importance, they offer less formal opportunities

for house staff to engage in and learn from the research and clinical laboratory activities that characterize this group of departments.

Therefore, this bulletin briefly describes ongoing investigational work in each of these departments to illustrate the research base available to house staff who wish to augment their clinical education. Not described in this bulletin are the Ph.D. programs in basic sciences offered through the graduate divisions of the college's Graduate School. However, graduate division courses may be available to house staff after appropriate arrangement.

### Department of Anatomy

SCHMIDT, ANTHONY J., Ph.D.,  
Chairman  
COLGAN, JAMES A., Ph.D., Assistant  
Professor, RCHS  
DINSMORE, CHARLES E., A.B., Ph.D.,  
Assistant Professor, RCHS  
HUGHES, W. FRANK, A.B., M.S.,  
Ph.D., Assistant Professor, RCHS and  
RMC  
HOVDE, CHRISTIAN A., A.B., M.A.,  
Ph.D., D.D., Assistant Professor, RCHS  
and RMC (also Psychiatry, and Religion  
and Health)

The primary role of the anatomical sciences is to provide fundamental knowledge of the architecture of the human body and the concepts relevant to its function. All branches of medicine are served by effective personal experiences in the topographic exploration of man's functioning biological structure, at both the gross and the microscopic levels. The education and research encompassed by the anatomical sciences includes gross human anatomy, cellular and histologic anatomy, neuroanatomy, and embryology.

Understanding and application

KHEDROO, LAWRENCE G., A.B.,  
D.D.S., M.D., Assistant Professor,  
RCHS and RMC (also General Surgery)  
MAIBENCO, HELEN C., B.S., M.S.,  
Ph.D., Professor, RCHS, RMC and  
RCN  
SCHMIDT, ANTHONY J., B.A., M.S.,  
Ph.D., Professor, RCHS and RMC  
SEALE, RAYMOND U., B.S., A.M.,  
Ph.D., Associate Professor, RCHS and  
RMC  
WAGONER, NORMA E., B.A., Ph.D.,  
Assistant Professor, RCHS and RMC

of anatomy are of particular value to the surgical services. Accordingly, the Department of Anatomy collaborates with the Department of General Surgery to offer a preceptorial and laboratory program in surgical anatomy at specific intervals during the academic year. The department also offers a series of short-term modules of instruction in regional anatomy, primarily for residents in specialty programs.

Advanced courses, currently accredited by the Graduate College of the University of Illinois, are offered during alternate years.

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Key: RMC—Rush Medical College; RCHS—Rush College of Health Sciences;  
RCN—Rush College of Nursing; PSLH—Presbyterian-St. Luke's Hospital;  
LOA—Leave of Absence; CMGH—Community Memorial General  
Hospital; SCH—Swedish Covenant Hospital;  
MSHMC—Mount Sinai Hospital Medical Center;  
CH—Christ Hospital, GCH—Galesburg Cottage Hospital;  
CDH—Central DuPage Hospital; WSH—West Suburban Hospital

## Anatomy . . .

These include: (1) Morphologic and Physiologic Adaptations to Growth, Aging and Injury; (2) Experimental Morphogenesis (Embryology); and (3) Cell Biology of Vertebrate Repair and Regeneration.

Research and scholarship in the anatomical sciences is encouraged. Currently, interdisciplinary collaboration includes investigations into the biomechanics of human motion, general and specific myopathies, ophthalmopathies, and neuropathogenesis.

Members of the faculty of the department are currently

investigating morphological changes in drug-induced dyskinesias; DNA synthesis during gestation; cell population renewal in oviduct and cervix; microbial endocarditis; cytological and molecular biology of wound healing, repair, and regeneration in muscular, nervous, soft connective, skeletal and other tissues; and teratology, particularly congenital anomalies of appendages.

Inquiries regarding additional programs and general information relative to the department's activities are welcome.

## Department of Biochemistry

**SKY-PECK, HOWARD H., Ph.D.** The  
John W. and Helen H. Watzek Chairman  
**BAYS, JAMES P., Ph.D.**, Assistant  
Professor, RCHS and RMC  
**BEZKOROVAINY, ANATOLY, Ph.D.**,  
Professor, RCHS and RMC and  
Senior Scientist, PSLH  
**BOOYSE, FRANCOIS M., Ph.D.**,  
Associate Professor, RCHS and RMC  
**CHANG, MIN-SHUAN, Ph.D.**,  
Instructor, RCHS  
**COHEN, MAYNARD M., M.D., Ph.D.**,  
Professor, RCHS and RMC and Senior  
Attending, PSLH (also Neurological  
Sciences)  
**COLE, EDMOND R., Ph.D.**, Associate  
Professor, RCHS and RMC and  
Associate Scientist, PSLH (also  
Hematology)  
**DEMIDOW, LUDMILLA, M.S., PhD.**,  
Instructor, RCHS and RMC  
**DUBIN, ALVIN, M.S., Associate**  
Professor, RCHS and RMC  
**HARRIS, LELAND, Ph.D.**, Professor,  
RCHS and RMC  
**HARRISON, WILLIAM H., Ph.D.**,  
Professor, RCHS and RMC (also  
Neurological Sciences)  
**HASKIN, FRANCIS C., Ph.D.**,  
Visiting Professor, RCHS and RMC,  
Complemental Faculty  
**HAYASHI, JAMES A., Ph.D.**, Professor,  
RCHS and RMC and Senior Scientist,  
PSLH  
**hof, hildegard i., Ph.D.**, Assistant  
Professor, RCHS and RMC and  
Associate Scientist, PSLH (also  
Psychiatry)  
**KACHMAR, JOHN F., Ph.D.**, Associate  
Professor, RCHS and RMC and Senior  
Scientist, PSLH

The Department of Biochemistry  
participates in clinical laboratory  
diagnostic services, teaches basic  
science and medical education

**KANAMARLAUDI, NARASHIMHARO,**  
Ph.D., Assistant Professor, RCHS and  
RMC and Assistant Scientist, PSLH  
**KORNEL, LUDWIG, M.D., Ph.D.**,  
Professor, RCHS and RMC and Senior  
Attending, PSLH (also Internal  
Medicine)  
**KUETTNER, KLAUSE E., Ph.D.**,  
Professor, RCHS and RMC (also  
Orthopedic Surgery)  
**LOBSTEIN, OTTO, Ph.D.**, Associate  
Professor, RCHS  
**MATTENHEIMER, HERMANN G. W.,**  
M.D., Professor, RCHS and RMC and  
Senior Scientist, PSLH  
**MILLER, ROBERTA J., M.D.**,  
Instructor, RCHS  
**MORLEY, COLIN, G.D., Ph.D.**,  
Assistant Professor, RCHS  
**QUARFOOT, ALAN J., Ph.D.**, Assistant  
Instructor, RCHS  
**RAFELSON, JR., MAX E., Ph.D.**,  
Professor, RCHS and RMC and Senior  
Scientist, PSLH  
**SKY-PECK, HOWARD H., Ph.D.**,  
Professor, RCHS and RMC and Senior  
Scientist, PSLH  
**SWENSON, JOHN C., Ph.D.**, Instructor,  
RCHS  
**TULLOSS, JAMES H., Ph.D.**, Instructor,  
RCHS  
**WEINSTOCK, ALBERT, Ph.D.**, Assistant  
Professor, RCHS and RMC (also  
Pathology)  
**WHISLER, WALTER W., M.D., Ph.D.**,  
Professor, RCHS and RMC and Senior  
Attending, PSLH (also Neurosurgery)

in the Rush College of Health  
Sciences and Rush Medical  
College, and conducts various  
programs of biomedical research.

## Biochemistry ...

The clinical laboratory, an up-to-date, automated facility, performs approximately 1,800,000 tests per year and provides an opportunity for teaching both human biology and biochemical basis for disease to medical and graduate students. Modern laboratory facilities and programs also provide an opportunity for the pre- and postdoctoral training of clinical chemists. The Biochemistry Department faculty offers formal lectures, seminars, specialty rounds, and elective courses in biochemistry, and conducts ongoing research programs for the participation of medical students, graduate students, research fellows, interns, residents, and staff.

The department maintains and encourages varied programs of research, including those listed below.

Human milk proteins have been under investigation during the past few years and represent an extension of previous work on bovine milk and colostrum proteins. Attention has been focused on those human milk proteins that stimulate the growth of *L. bifidus var. penn.* A number of such proteins from human colostrum and milk have been isolated. As shown previously, these glycoproteins were rather small in size, but contained enormous amounts of carbohydrate, including galactose, glucosamine, galactosamine, sialic acid, and fucose. The carbohydrate was partially removable with alkaline borohydride, indicating the presence of O-glycoside linkages, as well as possible heterogeneity of the oligosaccharide chains. These glycoproteins had no blood group activity and did not mediate cellular immunity. The human protoeose-peptone fraction was not analogous to that obtained from bovine milk. The main components of the human milk proteose-peptone fraction proved to be alpha-lactalbumin, the small glycoprotein promoting the growth of *L. Bifidus var. penn.*

previously isolated from human milk by a different method, a large molecular-weight glycoprotein of as yet unknown nature, and a temperature-sensitive protein, which precipitated at room temperature and dissolved upon cooling. Since it contained phosphate and its amino acid content was similar to that of beta-casein, we surmised that it may be one form of human beta-casein.

Studies continue on immunologic protection against dental caries caused by formation of antibodies against extracellular bacterial enzymes. Monkeys have been immunized with dextrosucrose, levensucrase, or neurominidose obtained from *Streptococcus sanguis* and *Streptococcus mutans*. Approximately 50% of those animals immunized were protected against dental caries as compared with control animals not immunized with enzymes. Inhibition of the neuraminidase activity by sera of immunized monkeys increased with immunization up to 90-100% inhibition, as compared to an average of 35% inhibition in the controls. Absorption of the monkey immune sera by human anti IgA, anti IgG, and anti IgM removed the neuraminidase inhibiting activity only in the sera absorbed by the anti IgM. The present data suggest that primates may be immunized against their own oral bacteria by using enzymes of these oral microorganisms to protect against dental caries. This protection is accompanied by production of enzyme-inhibiting substances in the serum. These inhibitions in the immune sera are removed by human anti IgM. Significantly, this fact points to the feasibility of a vaccine which will protect against most oral microorganisms and possibly protect against dental caries.

In conjunction with the Department of Orthopedic Surgery, the Biochemistry Program does studies on molecular organization of the extracellular



cartilage matrix and its relationship to the cells. The elucidation of the nature of the extracellular environment in which these processes occur is of great importance to the understanding of the mechanisms involved in cartilage metabolism and calcification. Such consideration involves the biochemical, physical, chemical, and physiological-morphological environment of the chondrocytes, which are themselves involved in the alterations of their own surroundings. Present concepts in molecular biology and histochemistry have put forward the hypothesis that cells "produce" and "govern" their extracellular matrix or "milieu" and that there is a feedback from the extracellular matrix to influence and regulate the physiological activity of the cell. Because in cartilage, the cells are embedded in a specific "matrix within a matrix" (the lacunar or territorial matrix), the chemical composition and the physiological state of this cellular environment have to be identified and understood before the proposed regulatory mechanisms of matrix-cell and cell-matrix interactions can be understood.

The present project limits itself to studies of the ground substance of the epiphyseal cartilage; however, the importance of cells or collagen is not overlooked. Collagen is indirectly a part of this investigation since the material that is not extracted with guanidinium chloride also will be under extensive study. High molarities of guanidinium chloride or other inorganic salts remove only 85-90% of the glycosaminoglycans from the tissue, leaving a significant amount of these compounds unextractable. This non-extractable material has been shown to be partially of different chemical composition than the extractable proteoglycans, particularly in that a significant "pool" of hyaluronic acid remains non-extractable. The model for these studies has been and will continue to be the epiphyseal

growth plate of mammals. In the epiphyseal plate there seems to be adequate evidence that the aggregated proteoglycans play a role in the calcification process via specific control mechanisms determinated by the local physiology of the cells of calcifying cartilage. This regulation may well involve the polyelectrolytes concentrated within the lacunar area of the cell. Calcification, however, is never seen within the lacunar area but occurs in an adjacent locus in the matrix of the hypertrophic and calcified zones. We speculate that specific anionic proteoglycans together with their associated glycoproteins and collagen are capable of regulating the different phases of calcification. We further speculate that the ratio of territorial (unextractable) and extraterritorial (extractable) proteoglycans and hyaluronic acid is regulated by the cell and that this ratio is extremely important for the processes of calcification.

It has been reported recently that hydrocortisone is able to stimulate adult rat hepatocytes in culture to undergo proliferation. Using a hepatocyte culture system, we have been able to show a significant increase in the DNA synthesis (measured by  $^3\text{H}$ -thymidine incorporation) of the cells when exposed to hydrocortisone, especially in the presence of dibutyryl-c-AMP, GTP, insulin, and glucagon. It has been observed that monolayer formation with these cells is best in the presence of insulin and has been shown that these are significant nucleotides. Increasing  $\text{Ca}^{2+}$  from 1.5 to 9 mM had no effect on the cells' capacity to synthesize DNA (in contrast to other cells) and addition of vitamin  $\text{B}_{12}$  had no effect on cells.

At present, an investigation is in progress into the optimum level of hydrocortisone for stimulation of the cells and into the effect on cells stimulated but uncommitted to DNA synthesis *in vivo* and how they may be "pushed" into DNA synthesis in culture.

A study of certain biochemical manifestations of von Willebrand disease is being done, using cultured aortic endothelial cells from normal and genetically altered pigs. The growth characteristics of the two types of cells are being monitored by radioactive labeling of macromolecules and by electron microscopy. Differences between normal and abnormal cells are studied by observing responses to biologically active reagents such as enzymes, hormones, and intermediary metabolites. Among the effects being studied are cellular attachments to substratum, presence of factor VIII, and rate of synthesis of ristocetin-Willebrand factor (RWF) and its location in the cell cultures. Specific assays include ristocetin induced platelet aggregation, immuno-electrophoresis, radioimmunoassay, immuno-fluorescence, and immuno-electron microscopy. The interaction of platelets with endothelium are being studied *in vitro*, using normal and diseased platelets and endothelium. This interaction is effected by enzymes, hormones, antibodies, metabolites, mechanical effects, and certain purified plasma proteins. Finally, the characteristics of the RWF produced in culture under various growth conditions is being compared to the plasma factor purified from normal pig plasma.

Studies continue on the nature and characterization of the collagenous-like macromolecules found both in cells and in a cultured medium. Endothelial cell cultures labeled with [<sup>14</sup>C]proline are being analyzed for their content and ratio of 3-hydroxy [<sup>14</sup>C]proline to 4-hydroxy [<sup>14</sup>C]proline. The [<sup>14</sup>C]proline labeled proteins are being purified and analyzed by gel filtration and SDS-agarose columns and SDS-polyacrylamide gels to determine the nature and apparent molecular weights of the peptides containing hydrox [<sup>14</sup>C]proline. The nature, linkage, and proportion of glycosylated and unsubstituted hydroxylysine is

being determined on [<sup>14</sup>C]lysine, galactosylhydroxy [<sup>14</sup>C]lysine, and glucosyl-galactosylhydroxy [<sup>14</sup>C]lysine.

An established line of cultured bovine aortic endothelial cells also has been used as a synthetic vessel wall model for studying certain aspects of *in vitro* platelet-endothelium (vessel wall) interactions. <sup>125</sup>I-labeled platelets (single or aggregates) do not interact with normal unactivated or undamaged monolayers of cultured endothelial cells. However, extensive interaction is observed after treatment of the monolayers with epinephrine, serotonin, trypsin, heat, and scraping. <sup>125</sup>I-labeled platelet-endothelial interaction was decreased by preincubation of the <sup>125</sup>I-labeled platelets with PGE, ATP, and aspirin. Optimum platelet-endothelial interaction was obtained at 120 rotations per minute for 4 minutes. Increasing numbers of platelets ( $0.2\text{-}3 \times 10^6$  platelets per u1) as well as increasing numbers of red cells ( $0.5\text{-}5 \times 10^5$  cells per u1) increased platelet-endothelial interaction. Electron microscopy of endothelial cultures, activated and interacted with platelets, showed the association of single platelets and platelet aggregates with an extensive matrix of 100-200 Å extracellular microfilaments (longitudinal sections) between and/or beneath the activated, cultured endothelial cell monolayer. The isolation and characterization of these microfilaments is in progress as a means of obtaining a better understanding of the role of these structures in platelet-vessel wall interactions and of the subsequent formation of mural thrombi.

Other studies of the Department of Biochemistry include the physical and chemical properties of human alpha-amylase and its isoenzymes from saliva and pancreas; cell kinetics and the metabolic control by DNA in cancer; the kinetics of creatine phosphokinase obtained from various human tissues; the effects

## Biochemistry . . .

## Department of Immunology

of nicotine and tobacco smoke on platelet-endothelial cell interaction; and the characterization of a

collagen-like protein found in platelets and red cells.

**GEWURZ, HENRY, M.D., The Thomas J. Coogan Sr. Chairman**  
CLAUS, DAVID R., B.S., M.S., Ph.D., Instructor, RCHS and RMC  
DICAMELLI, RALPH F., B.S., Ph.D., Instructor, RCHS and RMC  
FIEDEL, BARRY A., B.S., Ph.D., Assistant Professor, RCHS and RMC and Assistant Scientist, PSLH  
GEWURZ, ANITA T., B.S., M.D., Assistant Professor, RCHS and RMC and Assistant Scientist and Assistant Attending, PSLH (also Pediatrics)  
GEWURZ, HENRY, B.A., M.D., Professor, RCHS and RMC and Senior Scientist and Senior Attending, PSLH (also Pediatrics and Internal Medicine)  
GOLDEN, HARVEY E., B.A., M.D., Associate Professor, RCHS and RMC and Associate Attending, PSLH (also Internal Medicine)  
HANSEN, BARBARA, B.S., M.S., Ph.D., Assistant Professor, RCHS  
JAMES, KAREN, B.S., M.S., Assistant Professor, RCHS and Adjunct Scientist, PSLH  
JONES, JOHN V., B.A., M.D., Professor, RCHS and RMC and Senior Attending, PSLH (also Internal Medicine)  
LINT, THOMAS F., B.S., M.S., Ph.D., Assistant Professor, RCHS and RMC and Assistant Scientist, PSLH

LUSKIN, ALLAN, B.S., M.D., Assistant Professor, RCHS and RMC and Assistant Attending, PSLH (also Internal Medicine)  
MERKEL, FREDERICK K., B.S., M.D., Associate Professor, RCHS and RMC and Associate Attending, PSLH (also Surgery and Internal Medicine)  
OSMAND ALEXANDER P., B.S., Ph.D., Associate Professor, RCHS and RMC and Assistant Scientist, PSLH  
POTEMPA, LAWRENCE A., B.S., Ph.D., Instructor, RCHS  
SASSETTI, RICHARD J., B.S., M.D., Associate Professor, RCHS and RMC and Associate Attending, PSLH (also Internal Medicine)  
SIEGEL, JOAN N., B.S., Ph.D., Assistant Professor, RCHS and RMC and Assistant Scientist, PSLH  
SUYEHIRA, LISBETH, B.S., Assistant Professor, RCHS and RMC and Adjunct Scientist, PSLH  
YAMAMOTO, KEN-ICHI, M.D., Assistant Professor, RCHS and RMC  
ZEITZ, HOWARD, M.D., Assistant Professor, RCHS and RMC and Assistant Attending, PSLH (also Internal Medicine)

The Department of Immunology provides immunochemical and serologic diagnostic procedures for the Medical Center and evaluates the immune competence and ongoing immune reactions in patients with a variety of diseases.

The primary investigative interests of the department are: (1) the clinical, developmental, and experimental biology of the effectors of the immune response, particularly the complement system; (2) the clinical relevance of the acute phase and its interrelationship with the immune response in health and disease, particularly in neoplasia, blood vessel diseases, and allergic responses; and (3) the innovation and implementation of new approaches that utilize the immune response and immunoassays to aid the rapid diagnosis and treatment of disease. Study

emphasizes the chemistry and immunobiology of the reactants of the "acute phase," particularly C-reactive protein (CRP), a nonantibody serum protein that shares several structural and functional features with the immunoglobulins. CRP has emerged as a potent modulator of immune and nonimmune inflammatory responses at the level of both the complement system and the T-lymphocyte; elaboration of the underlying mechanisms and a clinical pharmacology based upon these interactions is under active exploration. Other current projects deal with immune mechanisms in arthritis, nephritis, and hepatitis.

Members of the department teach undergraduate and post-graduate courses in immunology and participate in hospital specialty rounds and seminar programs. Three-month elective clerkships



## Immunology . . .

### Department of Microbiology

are available for undergraduate students. Research and clinical fellowships for longer periods are arranged on an individual basis.

**WOLFE, LAUREN G., D.V.M., Ph.D.,**  
Acting Chairman  
**BARAM, PETER, B.S., M.S., Ph.D.,**  
Visiting Professor, RCHS and RMC  
**BERGHOLZ, CAROLYN M., B.A., M.S.,**  
Ph.D., Assistant Professor, RCHS and RMC  
**CASTO, BRUCE C., B.S., M.S., Sc.D.,**  
Professor, RCHS and RMC  
**FALK, LAWRENCE A., B.A., M.A.,**  
Ph.D., Associate Professor, RCHS and RMC and Associate Scientist, PSLH  
**FISHER, LESTER E., D.V.M., Associate**  
Professor, RCHS and RMC  
**GAVITT, FRANCES, B.A., M.S., Ph.D.,**  
Visiting Assistant Professor, RCHS and RMC  
**GOLDIN, MILTON, B.S., M.S., Ph.D.,**  
Associate Professor, RCHS and RMC  
(Mount Sinai Hospital Medical Center)  
**GOODHEART, CLYDE R., B.S., M.S.,**  
M.D., Professor, RCHS and RMC  
**HATCH, GEORGE G., B.A., M.A.,**  
Ph.D., Assistant Professor, RCHS and RMC  
**JONES, IRENE M., B.A., Ph.D.,**  
Assistant Professor, RCHS and RMC  
(Grinnell College)  
**LANDAU, WILLIAM, B.A., M.S., Ph.D.,**  
Associate Professor, RCHS and RMC  
and Associate Scientist, PSLH

**LEVIN, STUART, B.M., M.D., Associate**  
Professor, RCHS and RMC and  
Senior Scientist, PSLH (also Internal  
Medicine and Preventive Medicine)  
**MARCYNSKA, BARBARA, M.S.,**  
Ph.D., Assistant Professor, RCHS and RMC  
**McQUAY, RUSSELL M., B.A., Ph.D.,**  
Associate Professor, RCHS and RMC  
(Mount Sinai Hospital Medical Center)  
**NORTHROP, ROBERT L., B.S., D.V.M.,**  
Ph.D., Visiting Associate Professor,  
RCHS and RMC  
**OGDEN, JAMES D., B.S., D.V.M.,**  
Assistant Professor, RCHS and RMC  
**PERRY, EUGENE A., B.A., Ph.D.,**  
Assistant Professor, RCHS and  
RMC (Knox College)  
**PETERSON, DAVID A., B.S., M.S.,**  
Ph.D., Assistant Professor, RCHS and RMC and Assistant Scientist, PSLH  
**SCHUYTEMA, EUNICE H. C., B.S.,**  
M.S., Ph.D., Assistant Professor, RCHS and RMC and Assistant Scientist, PSLH  
**SHAFFER, JAMES G., B.S., Sc.D.,**  
Professor, RCHS and RMC (Mount  
Sinai Hospital Medical Center)  
**WELSH, THOMAS J., B.S., D.V.M.,**  
Ph.D., Assistant Professor, RCHS and RMC  
**WIDRA, ABE, B.A., M.S., Ph.D.,**  
Visiting Associate Professor, RCHS and RMC and Consulting Scientist, PSLH  
**WOLFE, LAUREN G., D.V.M., M.S.,**  
Ph.D., Professor, RCHS and RMC

The Department of Microbiology provides bacteriological diagnosis, identification of parasites and fungi, and routine virus isolation. Serological studies available include hemagglutination, complement fixation, agar gel diffusion, and more involved studies such as neutralizing antibody titration and fluorescent antibody examination.

The department maintains a marmoset colony of some 1,000 animals, consisting of a breeding colony of 175 permanent pairs, a nursery, and experimental colonies, the last primarily concerned with studies of oncogenic viruses, hepatitis, and chronic degenerative diseases of the central nervous system. Establishment of a primate model for brain tumors is being

pursued in collaboration with the Department of Neurosurgery. Microbiology also is cooperating with the Department of Obstetrics and Gynecology to define the association, if any, between herpes simplex virus type 2 and cervical carcinomas and to develop a suitable experimental primate model.

Studies continue, with the Section of Hepatology, Department of Medicine, on experimentally induced hepatitis A in marmosets and on characterization of the infectious agent(s) of hepatitis A. In collaboration with the Departments of Medicine and Surgery, studies are pursued to test the hypothesis that persistent latent infection with rubella virus plays a role in the etiology of some forms of rheumatoid arthritis.

## Microbiology . . .

The Bacteriology Section and the Infectious Disease Section of the Department of Medicine are analyzing computer-generated data of antibiotic susceptibility patterns as they relate to hospital infection surveillance. Studies are also being conducted on bacterial isolates of particular medical or epidemiological interest.

Members of the department teach in Rush Medical College and in the Department of Microbiology of the University of Illinois Graduate College. They also participate in hospital rounds, with

special emphasis on infectious diseases. Staff members based at Mount Sinai Hospital Medical Center participate in Rush educational activities, and the microbiology teaching programs at Grinnell and Knox Colleges are coordinated through the department. A three-month rotation through the department is available as part of the residencies in Internal Medicine, Surgery, and Pathology. Research fellowships for longer periods are arranged on an individual basis.

## Department of Pharmacology

**CARSON, PAUL E., M.D., Chairman**  
BACHAND, ROMEO T., M.D., Ph.D., Assistant Professor, RMC and RCHS and Assistant Attending PSLH (also Internal Medicine)  
**CARSON, PAUL E., M.D., Professor and Chairperson, RMC and RCHS and Senior Attending, PSLH (also Internal Medicine)**  
**EBERSMAN, DONALD S., Ph.D., Professor, RMC and RCHS and Senior Scientist, PSLH; Director, Section of Pharmaceutical Sciences**  
**ECHANOW, BERNARD, Ph.D., Visiting Professor, RMC and RCHS and Consultant, PSLH (also Anesthesiology)**  
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**GDALMAN, LOUIS, B.S., R.Ph., Professor Emeritus, RMC and RCHS and Emeritus, PSLH (also Internal Medicine)**  
**KLAWANS, HAROLD L., M.D., Professor, RMC and RCHS and Senior Attending, PSLH (also Neurological Science)**  
**MACLEOD, CATHERINE M., M.D., Assistant Professor, RMC and RCHS and Assistant Attending, PSLH (also Internal Medicine)**

**MOON, BYONG H., Ph.D., Assistant Professor, RMC and RCHS and Assistant Scientist, PSLH (also Internal Medicine)**  
**NAUSIEDA, PAUL A., M.D., Assistant Professor, RMC and RCHS and Assistant Attending, PSLH (also Neurological Sciences)**  
**NOOTENS, RAYMOND H., M.D., Assistant Professor, RMC and RCHS and Assistant Attending, PSLH (also Ophthalmology)**  
**PARKHURST, GEORGE W., Ph.D., Instructor, RMC and RCHS and Assistant Scientist, PSLH; Director of Laboratory Services**  
**PRANCAN, ARTHUR V., Ph.D., Assistant Professor, RMC and RCHS and Assistant Scientist, PSLH (also Internal Medicine)**  
**POWERS, RICHARD J., M.D., Assistant Professor, RMC and RCHS and Associate Attending, PSLH (also Internal Medicine)**  
**RIECKMANN, KARL H.W., M.D., Visiting Professor, RMC and RCHS and Consulting, PSLH**  
**TRENHOLME, GORDON M., M.D., Assistant Professor, RMC and RCHS and Assistant Attending, PSLH (also Internal Medicine)**  
**WEINER, WILLIAM J., M.D., Associate Professor, RMC and RCHS and Associate Attending, PSLH (also Internal Medicine)**

The Department of Pharmacology provides consultation in clinical pharmacology, supervises and coordinates the pharmacology teaching program for medical and graduate students, participates in the nursing and allied health pharmacology teaching program, offers continuing education for house officers

and staff, and provides facilities for clinical and laboratory investigation. Topics of special interest include the role of enzymes and genetically determined alterations of enzymes in cellular and drug metabolism as related both to normal regulatory processes and to clinical disorders, the chemotherapy of malaria and of

## Pharmacology . . .

cancer, and the role of prostaglandins, especially in shock. These investigations are pursued at the molecular, cellular, and clinical levels and are related to human enzyme variations, genetic and induced.

The studies on malaria are related to chemotherapy and immunology of chloroquine-resistant malaria and to the toxic and metabolic effects of antimalarial drugs. The studies on the role of human enzyme variation, especially as affected by the administration of drugs in the regulation of metabolism in health and in disease, are related to enzyme deficiencies as well as to clinical disorders such as diabetes mellitus, gout, uremia, hepatitis, malnutrition, and certain neoplastic diseases. Investigations of cell membrane-cytoplasmic interactions and the effects of drugs on them have revealed several specific mechanisms that may be operative physiologically in human red cells; for instance, cytoplasmic interactions with membrane NAD(P)ase have been shown to alter the structure and function of several enzymes related clinically to

susceptibility to hemolysis, to the regulation of carbohydrate metabolism, and to the conversion of methemoglobin to hemoglobin. The studies of endotoxin shock concern both the efficacy of corticosteroids as therapeutic agents and the metabolic changes responsible for the observed beneficial effect of these drugs. The role of prostaglandins in shock and in platelet aggregation is also under investigation.

The department maintains the Laboratory for Red Cell Genetics in the Section of Genetics and the Pharmacology Research Laboratory. In the Section of Pharmaceutical Sciences, an active clinical pharmacy program is being formulated in conjunction with the development of a Clinical Pharmacology Program and the establishment of laboratory drug services. Students, house officers, and fellows are encouraged to join in the clinical and investigational efforts of this department on a part time, quarterly, or yearly basis. Formal programs leading to the Ph.D. degree and the M.D./Ph.D. degree are being established in the Graduate School.

## Department of Physiology

**EISENBERG, ROBERT S., Ph.D., The Francis N. and Catherine O. Bard Chairman**  
BRUESCHKE, ERIC, M.D., Professor, RCHS and RMC (also Family Practice)  
**EISENBERG, BRENDA, Ph.D., Assistant Professor, RCHS and RMC (also Pathology)**  
**EISENBERG, ROBERT S., Ph.D., Professor, RCHS and RMC**  
**GILAI, ARIEH, Ph.D., Assistant Professor, RCHS**  
**GOTTLIEB, GERALD, Ph.D., Associate Professor, RCHS and RMC**  
**HEGYVARY, CSABA, M.D., Associate Professor, RCHS and RMC and Associate Scientist, PSLH (also Internal Medicine)**  
**KOOTSEY, MAILEN J., Ph.D., Visiting Professor, RCHS**

Research activities of the Department of Physiology fall into three broad areas: (1) bio-

**LEVETT, JEFFREY, Ph.D., Associate Professor, RCHS and RMC (also Ophthalmology)**  
**MATHIAS, RICHARD T., Ph.D., Assistant Professor, RCHS**  
**MICHAEL, JOEL, Ph.D., Associate Professor, RCHS and RMC (also Neurological Sciences)**  
**MILNER-BROWN, SANDY, M.D., RCHS and RMC (also Neurological Surgery)**  
**PENCEK, TERRENCE L., Ph.D., Assistant Professor, RCHS and RMC**  
**ROVICK, ALLEN A., Ph.D., Associate Professor, RCHS and RMC**  
**SCHAUF, CHARLES L., Ph.D., Associate Professor, RCHS and RMC (also Neurological Sciences)**  
**STARR, MATTHEW C., Ph.D., Assistant Professor, RCHS and RMC**

logical membranes and their various processes; (2) information processing in the central



## Physiology . . .

nervous system; and (3) control of the peripheral and the cerebral vasculature.

Active transport mechanisms in biological membranes are being studied; procedures are being developed to identify and purify the digitalis receptor of the heart, an essential step in a long-term project to learn more about the reaction mechanisms of the sodium-pump as it relates to the actions of digitalis. The electrical properties of skeletal and cardiac muscle membranes also are being studied through the use of experimental and theoretical mathematical approaches; one focus of this work is the phenomenon of excitation-contraction coupling. Finally, voltage-clamped giant axons are being studied to elucidate the voltage-dependent permeability changes characteristic of nerve membranes and to determine the effects of different drugs on these processes.

Neurophysiological studies of information processing in the mammalian central nervous system are directed toward an understanding of the mechanisms of the visual system (including the processes involved in detection of a moving retinal image), the effects of hypoxia

and hyperthermia on such processes, and the organization of the human motor system at the level of the spinal cord.

Circulatory studies are underway on a number of different levels. Different parts of the central nervous system show varying sensitivity to hypoxia, and studies are underway to determine the role that regional differences in the cerebrovasculature may play in this phenomenon. Another project is aimed at evaluating the effects of the arterial pressure pulse on the ability of blood vessels to maintain constrictor tone and on the ability of the vascular smooth muscle of small blood vessels to respond to vaso-active agents. Finally, the relationship between the nutrient requirements of a tissue and the microvasculature is being investigated.

Members of the department teach at both undergraduate and postgraduate levels in the Medical Center and collaborate with other departments within the Medical Center and in neighboring institutions in both teaching and research. Teaching activities at Rush include a core physiology course, elective courses, and supervision of research training.

## Department of Psychology and Social Sciences

**BROCKEN, CECILIA, Ph.D.,**  
Acting Chairperson  
**BERKSON, GERSHON, B., B.A., M.S.,**  
Ph.D., Visiting Professor, RCHS and RMC  
**BIELIAUSKAS, LINAS, B.S., M.S.,**  
Ph.D., Instructor, RCHS and RMC and Adjunct Scientist, PSLH  
**BRAITMAN, LEONARD, M.A.,**  
Instructor, RCHS, RMC and RCN  
**BROCKEN, CECILIA, B.S., M.A., Ph.D.,**  
Associate Professor, RCHS and RMC and Associate Scientist, PSLH (also Pediatrics)  
**CHEIFETZ, DAVID I., M.A., Ph.D.,**  
Professor, RCHS and RMC and Senior Scientist, PSLH  
**CHRISTMAN, LUTHER, B.S., Ed.M.,**  
Ph.D., Professor, RCN, RCHS, and RMC and Senior Scientist, PSLH  
**CLARK, DAVID C., B.A., Instructor,**  
RCHS and RMC (also Psychiatry)

**COOPER, BARBARA J., B.A., Assistant,**  
RCHS and RMC  
**COUNTE, MICHAEL A., B.A., M.A.,**  
Ph.D., Assistant Professor, RCHS, RMC, and RCN  
**DAVIS, LUCILLE, B.S.N., M.S.N.,**  
Ph.D., Associate Professor, RCHS, RMC, and RCN  
**DRISCOLL, PAUL F., M.Ed., Instructor,**  
RCHS and RMC (also Pediatrics)  
**EXUM, DOLORES, B., B.A., M.S.W.,**  
Associate, RCHS and RMC (also Preventive Medicine)  
**FELDMAN, HOWARD S., A.B., M.S.,**  
Ph.D., Assistant Professor, RCHS and RMC and Assistant Scientist, PSLH  
**FREEMAN, ANDERSON C., M.A.,**  
Assistant, RCHS and RMC  
**FUNK, JEANNE, A.B., Ph.D.,**  
Assistant Professor, RCHS and RMC and Assistant Scientist, PSLH (also Pediatrics)

## **Psychology and Social Sciences . . .**

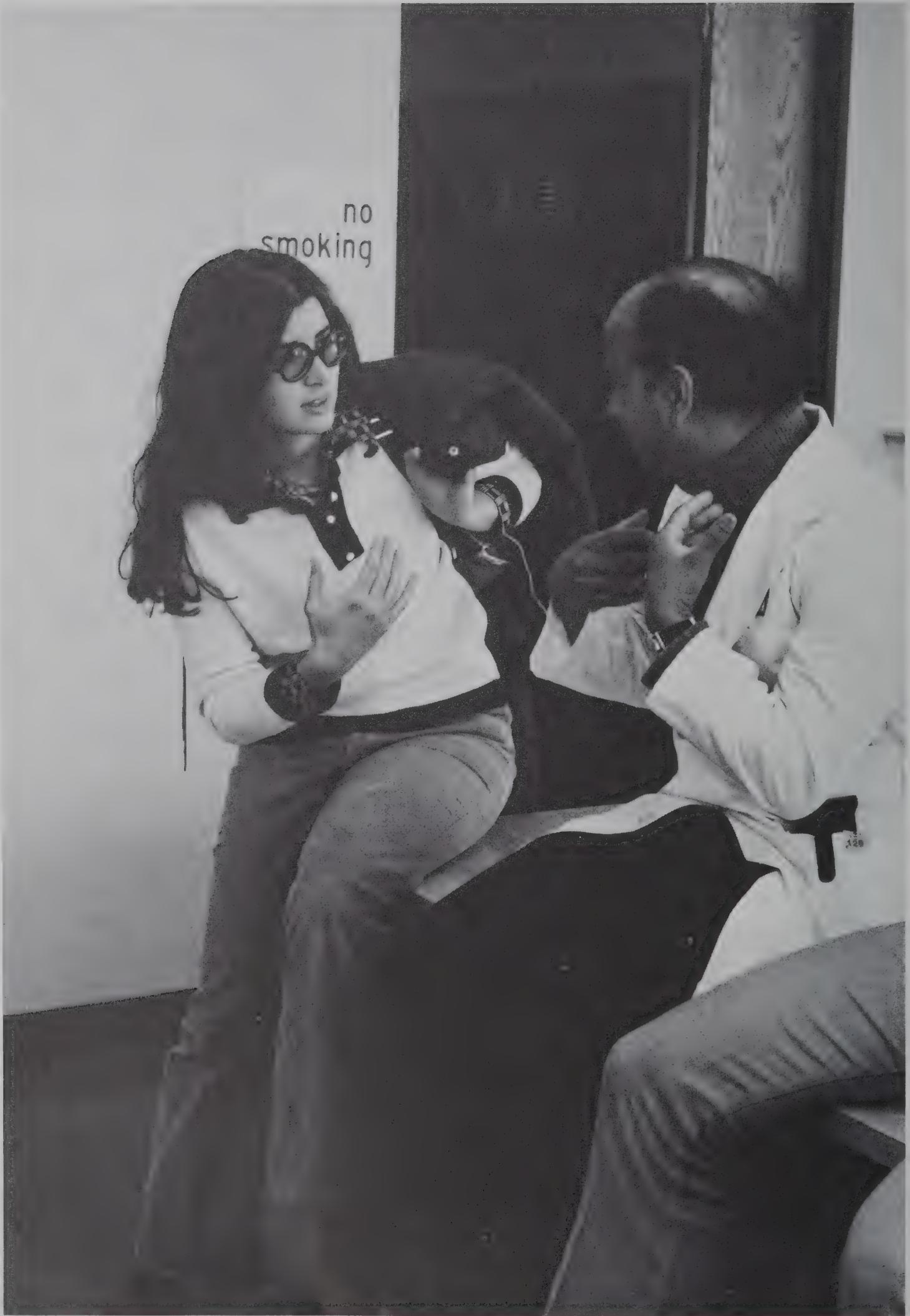
GARRON, DAVID C., B.A., M.A., Ph.D., Professor, RCHS and RMC and Senior Scientist, PSLH	MILLER, ROBERT B., B.S., M.S., Ph.D., Assistant Professor, RCHS
GUISE, GRACIA, B.S., M.S., Associate, RCHS and RMC and Assistant Scientist, PSLH (also Psychiatry)	MONCRIEFF, ELLSWORTH, H., B.A., Complemental Faculty, RCHS and RMC
HARTINGS, MICHAEL F., B.A., M.S., Ph.D., Associate Professor, RCHS, RMC, and RCN and Associate Scientist, PSLH	PADONU, GEORGIA B., R.N., B.S.N., M.S.N., M.P.H., Dr. P.H., Assistant Professor, RCHS, RMC, and RCN
HEGYVARY, SUE T., B.S.N., M.N., Ph.D., Associate Professor, RCHS and RCN	PAVLOU, MARCIA, M., B.A., M.A., Ph.D., Assistant Professor, RCHS and RMC and Assistant Scientist, PSLH (also Neurological Sciences)
KASZNAIK, ALFRED W., B.S., M.A., Ph.D., Assistant Professor, RCHS and RMC and Assistant Scientist, PSLH	PISANI, VINCENT D., B.S., M.A., Ph.D., Assistant Professor, RCHS and RMC and Assistant Scientist, PSLH (also Psychiatry)
LARSEN, ROGER, P., M.A., Assistant, RCHS and RMC	PSARRAS, GEORGETTE, M., B.A., M.A., Ph.D., Assistant Professor, RCHS and RMC and Assistant Scientist PSLH (also Psychiatry)
LEAVITT, FRANK, B.A., Ph.D., Associate Professor, RCHS and RMC and Senior Scientist, PSLH	RIZZUTI, RONALD L., M.A., Assistant, RCHS and RMC
LEFEBVRE, KENNETH A., B.S., Assistant, RCHS and RMC	SCHNEIDER, ANNE S., R.N., B.A., M.A., Ph.D., Assistant Professor, RCHS and RMC and Assistant Scientist, PSLH
LINDNER, RONALD S., B.A., Ph.D., Associate Professor, RCHS and RMC and Associate Scientist, PSLH	SCHOENENBERGER, JOSEPH C., B.S., M.S., Ph.D., Assistant Professor, RCHS and RMC and Assistant Scientist, PSLH (also Preventive Medicine)
LINSKY, MILES, B.S., M.S., Ph.D., Assistant Professor, RCHS	ULRICH, LARRY K., B.A., M.Div., S.T.M., D.Min., Assistant Professor, RCHS and RMC
LIPOFF, DENNIS A., B.S., M.B.A., Ph.D., Assistant Professor, RCHS and RMC and Assistant Scientist, PSLH (also Psychiatry)	WATSON, LAURA H., B.A., M.A., Instructor, RCHS and RMC and Adjunct Scientist, PSLH (also Psychiatry)
LIPGAR, ROBERT M., Ph.D., Visiting Professorial Lecturer, RCHS and RMC	WILSON, ROBERT S., M.A., Ph.D., Instructor, RCHS and RMC and Adjunct Scientist, PSLH
McNAMARA, BARRY T., B.S., J.D., Honorary Faculty, Lecturer, RCHS and RMC	
MARTIN, DAN, Ph.D., Honorary Faculty, RCHS and RMC	
MEAD, JOHN D., M.S., Instructor, RCHS and RMC and Adjunct Scientist, PSLH	

The Department of Psychology and Social Sciences offers a full-time internship, approved by the American Psychological Association, which fulfills the internship requirement for a doctoral program in clinical psychology. Emphasis is placed on the clinical psychological understanding of children and adults and of events that have impact upon their adaptation. Training encompasses medical and psychiatric populations and special attention is given to psychological, social, and developmental problems that

The department, which focuses on both the basic science and the clinical aspects of psychology, provides an unusual setting for the

arise in multidisciplinary health settings. Basic elective options in general clinical psychology, community psychology, child psychology, neuropsychology, and health care psychology determine the focus of training for each intern. The program provides didactic work and clinical experience aimed at developing professional competence in the diagnosis, treatment, and clinical management of psychopathologic conditions and of the psychological accompaniments of acute and chronic medical conditions.

training of professional psychologists. Special advantages accrue to the staff and interns because of the organization of psychologists



## *Training Setting . . .*

on the faculty and staff in an independent departmental structure. Consequently, psychologists in their scientific, academic, and clinical service activities can function with the same degree of professional independence and autonomy that characterize other professional groups in the medical center.

This form of organization has permitted innovative program development in the areas of medical education and clinical service delivery, and has managed the issue of professional autonomy in a highly desirable manner. The Section of Social Sciences provides consultation and periodic input into the training of interns by faculty in sociology, medical jurisprudence, social work, and related fields.

Every intern's clinical activities receives detailed personal supervision that continues throughout the training year even when the intern progresses to higher levels of clinical competence. The intern is given all the independence of function he or she is ready to assume. Formal evaluation of interns' progress is conducted at mid-year and at the end of the year, and periodic formal feedback sessions are held with the training director. Frequent intensive supervision coupled with on-going evaluation of the intern's work assures maximum opportunity to profit from internship experiences.

Multiple clinical settings and clinical programs throughout the Medical Center offer training experiences to interns. Programs of special note include the General Consultation Service, the Neuropsychology Service, the Office of Behavioral Studies, the Multiple Sclerosis Center, the Pediatric Psychology Program, the Children's Therapeutic Day School, and the Community Psychology Program. Over twenty profes-

sional clinical psychologists staff these programs, which are located throughout the Medical Center. The department is particularly interested in the roles and functions of the professional psychologist in the general medical setting, including his or her contribution to multidisciplinary care of the medical patient.

The clinical programs of the department reflect the various roles and functions of the psychologist in the medical setting. In addition to the traditional problems of evaluation and care of psychiatric populations, the activities of psychologists cover medical departments hospital-wide in which the application of psychological principles and techniques can be clearly demonstrated. The department provides diagnostic consultation and evaluation in the traditional psychiatric and neuropsychological conditions and in the areas of pain, aging, chronic disease, rehabilitation, tension states, and learning disabilities. The department serves as an active referral resource for patients with somatic complaints but no physical findings, and for the more acute emotional and behavioral disturbances seen in relation to medical conditions. Treatments for such conditions include behavioral management, short-term psychotherapy, crisis intervention, behavior modification, biofeedback, and counseling.

Psychological programs of other departments also serve as a training base for interns. The Psychiatry Department maintains an in-patient unit for adults, out-patient programs for adults and children, and a Therapeutic Day School for emotionally and behaviorally disturbed children. The psychology staff of the Department of Pediatrics provides diagnostic and therapeutic services to children up to 18 years of age, and to their families. Presenting problems range from

### *Training Setting . . .*

#### *General Clinical Psychology Internship*

traditional types of psychopathology to management problems resulting from acute and chronic illness. The Community Psychology Program of the Mile Square Department of Mental Health provides comprehensive mental

This internship emphasizes the important contribution the clinical psychologist can make in the general hospital setting. It is the broadest training option offered, and provides solid clinical training and diverse experience. At any given time, the general intern will be responsible for diagnostic assessment of at least 20 patients and will carry a therapeutic caseload of 8 cases. These may be individuals, couples, families, or patient groups. The intern also may elect to include in his or

#### *Clinical Child Internship*

Clinical child interns are encouraged to define their roles within the broad spectrum of child behavior, normative as well as pathological. Consequently, the program emphasizes familiarity and appropriate techniques for dealing with the manifold problems of children in health care settings. Child interns will receive training in the programs of Pediatric Psychology and in the Children's Therapeutic Day School. In combining these training settings, interns obtain comprehensive training in the assessment and treatment of childhood psychopathology, and in the assessment and amelioration of developmental problems associated with medical

#### *Clinical Neuropsychology*

This program, which is intended for those interested in clinical or clinical research careers in neuropsychology, emphasizes the assessment of cognitive and affective sequelae of central nervous system disorders. The neuropsychology service of the

health care on the individual, family, and community levels. With a staff of six psychologists, the Community Psychology Program provides multiple services to urban inner-city residents who have long been an underserved population.

her program areas of special interest, such as child psychology, chronic disease, geriatrics, community mental health, or work with other special patient populations. The intern can expect to work in multidisciplinary settings, combining his or her skills with those of neurologists, psychiatrists, pediatricians, and other medical specialists. Additional training is gained in staff and ward meetings, training seminars, and case conferences.

conditions. Training will emphasize early recognition of emotional and behavioral problems, the relation of medical conditions to psychological difficulties, emotional and familial problems that complicate medical management, hospitalization and its effects, birth defects, language disorders, and others. In the Day School, interns can relate classroom behavior to diagnostic assessment and progress in psychotherapy. In both programs, parents, children, and families may be seen. Interns are involved in all aspects of clinical service in these settings and participate regularly in clinical staffs, rounds, and conferences.

department offers consultation to the Departments of Neurology, Neurosurgery, and the J. R. Bowman Health Center for the Elderly. Special emphasis is placed upon the study of the dementias, neurological aspects of aging, focal manifestations of vascular disease,

## *Clinical Neuropsychology . . .*

focal and diffuse cerebral lesions, neo plastic disease, epilepsies, toxic states, and other conditions that affect cognitive function. The clinical utility of neuropsychological assessment is demonstrated in inter-disciplinary settings. Direct therapeutic services, involving the use of biofeedback in the management of pain and stroke patients, is sometimes provided in

collaboration with the Office of Behavioral Studies. Interns in neuropsychology participate in many seminars and courses in the neurosciences offered in the Medical Center, including brain-cutting, EEG seminars, and ward rounds. Clinical diagnostic skills receive major emphasis in this program.

## *Health Care Psychology*

This internship emphasizes the application of psychological principles and techniques to complicated medical/behavioral problems. New programs, involving, for example, the Office of Behavioral Studies, and the Multiple Sclerosis Center, have been developed to bring psychological techniques to bear on various chronic and acute medical conditions, such as chronic headache, pain disorders, neuromuscular disorders, speech disorders, hypertension, asthma,

chronic GI distress, arthritis, tension states, and multiple sclerosis. Interns train within these departmental programs, spending the remaining half of their time in the general internship program. Interns will learn to provide psychological services in diagnosis, management, and treatment, utilizing traditional and innovative modalities. Interns are expected to participate in all aspects of patient care and new program development.

## *Clinical Community Psychology*

The Community Psychology internship is a joint program of this department and the Department of Mental Health at nearby Mile Square Health Center. Thus, the internship is well-founded on the hospital's established psychological programs and on the innovative community approaches available in a community setting. This arrangement allows interns to build foundation skills in diagnosis and psychotherapy while applying the body of psychological knowledge and skills at the community level. Community training emphasizes broad-based application of psychological skills to problems on the individual,

social, and community levels. Interns will train in sustaining care programs, out-patient treatment programs, community day treatment centers, crisis intervention units, primary prevention programs in neighborhood schools, and in coordinated medical/behavioral programs in such areas as nutrition, family planning, and community nursing. In most cases, liaisons will be emphasized with state agencies and boards, private service organizations, schools, and other community resources necessary for effective service integration. Interns can participate in all aspects of program development.

## *Research in the Training Year*

The internship is viewed as a year of intensive clinical training, which does not leave time for pursuit of independent research. Interns are strongly encouraged to avoid the necessity of overlapping internship training with dissertation activities. However, research interests of interns are highly valued by staff

when they arise in connection with clinical activities. Where resources exist, such interests are encouraged to develop. The staff, however, does not view internship as including research training, access to patient populations for research purposes, or time for outside research projects.

### *Training Staffs and Seminars*

Many courses in the Rush Medical College curriculum (neurosciences, endocrine systems, pharmacology, etc.) are available for interns to audit. The Medical Center is replete with training staffs, seminars, and clinical conferences in virtually every medical and basic science specialty, and these can be attended by all Medical Center trainees. In addition, special intern training seminars are offered by this department. These include Diagnostic Case Conference, Psychotherapy Seminar, Family Therapy Seminar, Child Therapy Semi-

nar, and Rorschach Seminar. In addition, special seminars can be provided in other areas such as neuropsychology, descriptive psychopathology, community psychology, and professional problems. Such seminars may make use of the audiovisual facilities of the Medical Center, including videotaped television capabilities, one-way rooms, and audi-tape recordings. The department has acquired tape recorders, one-way mirror rooms, an extensive book and tape library, biofeedback and research equipment.

### *Eligibility*

Students of university doctoral programs in clinical psychology are eligible for appointment. Stipends are provided by funds from the Medical Center and NIMH at an annual level of \$8,000. Six internships are awarded each year; four are available to students of APA approved programs; two are available for exceptional students from non-APA approved programs. Applications are reviewed independently. Appointment procedures follow the guidelines of the Association of Psychology

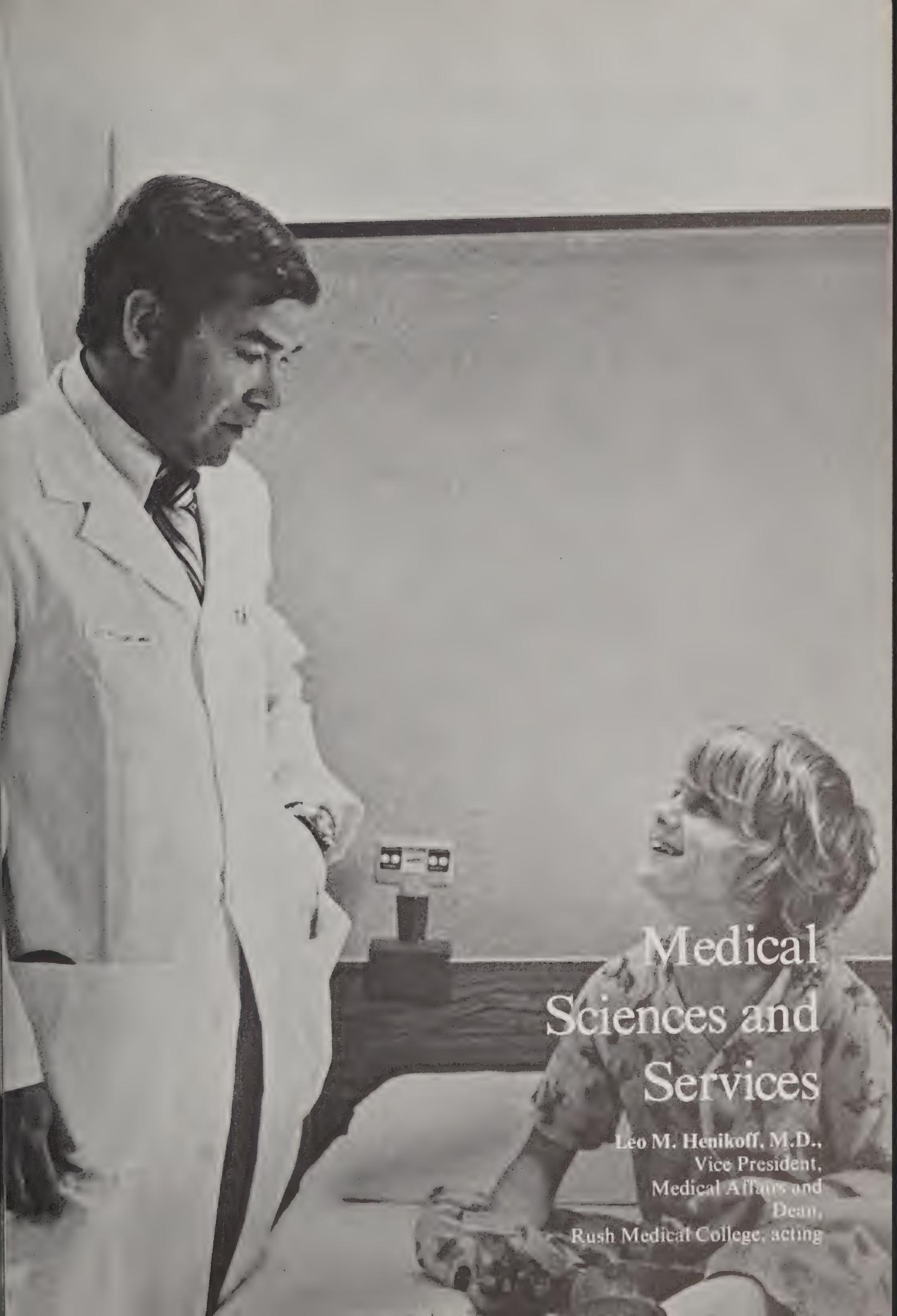
**Internship Centers.** Applications should be received by January 31, for appointment the following September. For further information and a detailed brochure, write to:

Michael F. Hartings, Ph.D.  
Director of Education and Clinical Training  
Department of Psychology and Social Sciences  
Rush-Presbyterian-St. Luke's Medical Center  
600 South Paulina  
Chicago, Illinois 60612

### *Fellowship in Clinical Neuropsychology*

The department offers a post-doctoral fellowship in human clinical neuropsychology that is open to graduates of doctoral programs in clinical psychology or related fields. The applicant should have doctoral level knowledge of brain structure and function, of clinical concepts, and of techniques for assessing cognitive function, and should have explicit interests in clinical neuropsychological research. Clinical in-patient and out-patient populations are available for research purposes, and collaboration with other depart-

ments is encouraged. Possible topics for research include brain function, epilepsy, aging, dementia, language disturbance, human behavior genetics, biofeedback, stroke rehabilitation, pain, alcoholism, basal ganglia disease, and chronic disease. Appointment is for a one-year term, and re-appointment for a second year is possible. Stipend is \$10,500 per year. For further information write to the Director of Training for a descriptive brochure.



# Medical Sciences and Services

Leo M. Henikoff, M.D.,  
Vice President,  
Medical Affairs and  
Dean,  
Rush Medical College, acting

## Department of Dermatology

MALKINSON, FREDERICK D., D.M.D., M.D., Chairman  
BIELINSKI, STEFAN, B.S., M.D., Assistant Professor, RMC and Associate Attending, PSLH  
BLANKENSHIP, MARSHALL, M.D., Assistant Professor, RMC and Assistant Attending, PSLH  
EARLES, RENE, B.S., M.D., Instructor, RMC and Assistant Attending, PSLH  
ERTLE, JAMES, M.D., Assistant Professor, RMC and Assistant Attending, PSLH  
FINNERUD, CLARK W., B.S., M.D., Emeritus, RMC and Emeritus, PSLH  
HAEBERLIN, JR., JOHN B., B.S., M.D., Emeritus, RMC and Emeritus, PSLH  
KAPLAN, SIDNEY, M.S., M.D., Assistant Professor, RMC and Assistant Attending, PSLH

MALKINSON, FREDERICK D., D.M.D., M.D., Professor, RMC and Senior Attending, PSLH  
O'DONOGHUE, MARIANNE N., A.B., M.D., Assistant Professor, RMC and Assistant Attending, PSLH  
PEARSON, ROGER W., M.D., Professor, RMC and Senior Attending, PSLH  
ROSTENBERG, JR., ADOLPH, M.D., Emeritus, RMC and Emeritus, PSLH  
SMITH, EDWIN, M.D., Emeritus, RMC and Emeritus, PSLH  
SPINKA, HAROLD M., B.S., M.D., Assistant Professor, RMC and Associate Attending, PSLH  
STROHL, LEE H., M.D., Instructor, RMC and Assistant Attending, PSLH  
SZYMANSKI, FREDERICK J., M.D., Professor, RMC and Senior Attending, PSLH

The Department of Dermatology is devoted to patient care, medical student teaching, resident training, and clinical and laboratory research. Out-patient clinics and an inpatient service, as well as consultations for hospitalized patients, are provided. All private patients in the offices of the full-time staff are seen by residents and medical students. The department conducts regular formal and informal teaching sessions for house staff and students as well as clinical sessions for the entire full- and part-time departmental staff. Clinical instruction for students is provided by a three-month course in the second medical school year. This course relates the physiology and biochemistry of the skin to clinical disease processes and introduces the students to clinical dermatology, with many case demonstrations. In addition, the department accepts two third- or fourth-year medical students per month for an elective period. Medical students who elect to rotate through the Dermatology Department also see consultations and out-patients, and assume

responsibilities for the in-patient service—all under the supervision and instruction of full-time staff members.

Three main areas of laboratory research are currently under active investigation: (1) the effects of ionizing radiation and drugs on proliferating hair matrix cells; (2) ultrastructural analysis of skin reactions to injury, especially from ionizing radiation and chemotherapeutic agents; and (3) metabolism studies of steroids and sebaceous gland cells. Active areas of clinical research include effects of antibiotics on immunologic responsiveness, certain types of skin reactions to staphylococcal infections, and ultrastructural pathology of blistering disease.

The Department of Dermatology is approved for the full three-year training program for residents in dermatology and generally accepts one resident each year. Currently, three residents are in training.

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**Key:** RMC—*Rush Medical College*; RCHS—*Rush College of Health Sciences*; RCN—*Rush College of Nursing*; PSLH—*Presbyterian-St. Luke's Hospital*; LOA—*Leave of Absence*; CMGH—*Community Memorial General Hospital*; SCH—*Swedish Covenant Hospital*; MSHMC—*Mount Sinai Hospital Medical Center*; CH—*Christ Hospital*, GCH—*Galesburg Cottage Hospital*; CDH—*Central DuPage Hospital*; WSH—*West Suburban Hospital*

## Department of Internal Medicine

SCHWARTZ, THEODORE B., M.D., Chairman	BLACK, ARNOLD, M.D., Professor, RMC and Senior Attending, PSLH
KARK, ROBERT M., M.D., Associate Chairman	BOGDONOFF, MAURICE L., M.D., Professor, RMC and Senior Attending, PSLH (also Diagnostic Radiology)
TROBAUGH JR., FRANK E., M.D., Associate Chairman	BOHAN, JOHN L., A.B., B.M., M.D., Assistant Professor, RMC, GCH
HARRIS, ALAN A., M.D., Assistant Chairman	BOLTON, CORNELIUS F., B.S., M.D., Assistant Professor, RMC and Assistant Attending, PSLH
HUDSON, EDSEL K., M.D., Assistant Chairman	BOLTON, EDMUND M., B.S., M.D., Instructor, RMC and Adjunct Attending, PSLH
ACKERMAN, LAURENS V., B.A., M.D., Assistant Professor, RMC (also Diagnostic Radiology)	BONBREST, H. CONSTANCE, A.B., M.D., Assistant Professor, RMC and Assistant Attending, PSLH (also Preventive Medicine)
ADLER, SOLOMON S., B.S., M.D., Assistant Professor, RMC and Assistant Attending, PSLH	BREGMAN, ANDREW, M.D., Instructor, RMC and Adjunct Attending, PSLH, CDH
AGGARWAL, RAJ K., Ph.D., Assistant Professor, RMC and Assistant Scientist, PSLH	BREUHAUS, HERBERT C., B.S., M.D., Emeritus, RMC and Emeritus, PSLH
AGRUSS, NEIL, B.S., M.D., Assistant Professor, RMC	BRINEY, ROBERT R., M.D., Visiting Assistant Professor, RMC and Consultant, PSLH
AKRE, OSMUND H., B.A., M.D., Emeritus, RMC and Emeritus, PSLH	BRODY, LITA, B.A., B.S., Instructor, RMC
ALAVI, ILTIFAT A., B.S., M.B.B.S., M.R.C.P., Assistant Professor, RMC, CMH	BROWN, R. GORDON, A.B., M.D., Associate Professor, RMC and Senior Attending, PSLH
ANDREWS, WILLIAM J., B.S., M.D., Associate Professor, RMC, SCH	BROWN, WILLIAM C., M.D., Assistant Professor, RMC and Senior Attending, PSLH
ASHBACH, DAVID L., A.B., M.D., Instructor, RMC and Adjunct Attending, PSLH	BROWNING, KENNETH R., B.S., M.D., Instructor, RMC and Adjunct Attending, PSLH
BACHAND, ROMEO T., B.S., Ph.D., M.D., Assistant Professor, RMC and Assistant Attending, PSLH (also Pharmacology)	BUCHELERES, H. GUNTHER, M.D., Professor, RMC and Senior Attending, PSLH (also Pediatrics)
BACHMANN, FEDOR, B.A., M.D., Visiting Associate Professor, RMC and Consultant, PSLH	CAMPBELL, JAMES A., B.A., M.D., Professor, RMC and Senior Attending, PSLH
BACKER, M. BARBARA, A.B., M.D., Assistant Professor, RMC and Assis- tant Attending, PSLH	CARASSO, BEN, B.A., M.D., Associate Professor, RMC and Associate Attending, PSLH
BACUS, JAMES W., B.S., Ph.D., Asso- ciate Professor, RMC and Associate Scientist, PSLH	CARSON, PAUL E., M.D., Professor, RMC and Senior Attending, PSLH (also Pharmacology)
BAKKEN, C. DAVID, B.A., M.D., Instructor, RMC and Adjunct Attending, PSLH	CARTON, ROBERT W., A.B., M.D., Professor, RMC and Senior Attending, PSLH
BALDWIN, DAVID, A.B., M.D., Associate Professor, RMC and Senior Attending, PSLH	CAVANAUGH, STEPHANIE, B.S., M.D., Assistant Professor, RMC and Assistant Attending, PSLH (also Psychiatry)
BALKOURA, MARIA H., M.D., Assistant Professor, RMC, MSHMC	CHADHA, GURBACHAN S., M.B.B.S., M.D., Instructor, RMC and Adjunct Attending, PSLH
BALL, FRED E., B.S., B.M., M.D., Emeritus, RMC and Consultant, PSLH	CHHABLANI, RAMESH, B.S., M.B.B.S., M.D., Instructor, RMC and Adjunct Attending, PSLH
BARTON, EVAN M., B.A., M.D., Professor, RMC and Senior Attending, PSLH	CLARK, JAMES G., B.S., M.D., Assistant Professor, RMC and Associate Attending, PSLH
BATSON, HERBERT C., Ph.D., Emeritus, RMC and Emeritus, PSLH	CODINI, MICHELE A., M.D., Assistant Professor, RMC and Assistant Attending, PSLH
BATTLE, WILLIAM E., B.A., M.D., Assistant Professor, RMC and Assistant Attending, PSLH	COLANDREA, MICHAEL A., M.D., Assistant Professor, RMC and Associate Attending, PSLH
BECKER, FRANK O., B.M., M.D., Asso- ciate Professor, RMC and Associate Attending, PSLH, CH	
BICE, MICHAEL K., M.D., M. DIV., Instructor, RMC	
BLAAUW, BERNARD B., B.S., M.D., Assistant Professor, RMC and Assis- tant Attending, PSLH	



## **Internal Medicine . . .**

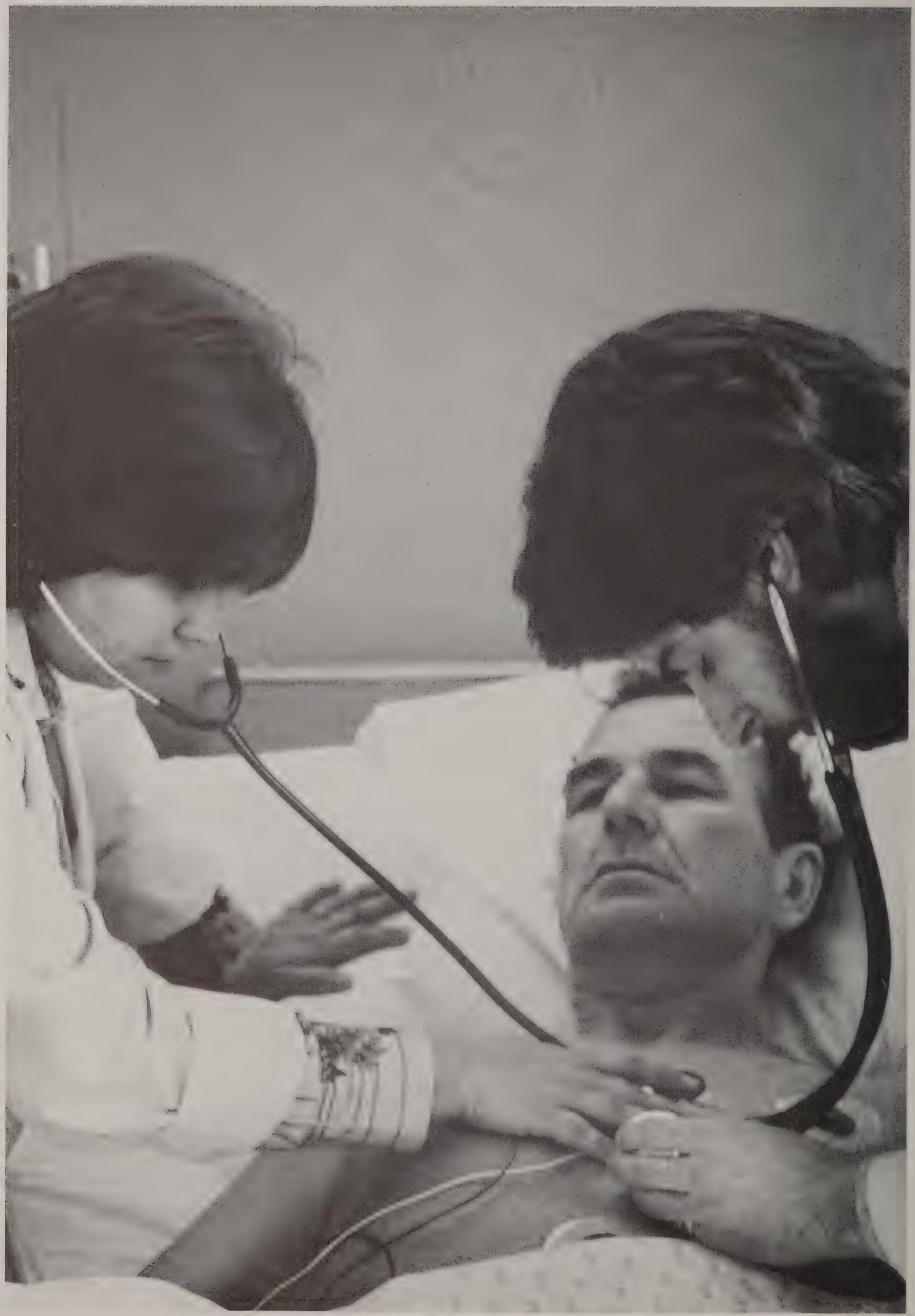
COLE, DAVID R., B.A., M.D., Associate Professor, RMC, CH	EYBEL, CARL E., B.S., M.D., Assistant Professor, RMC and Assistant Attending, PSLH
COLE, EDMUND R., B.S., M.S., Ph.D., Associate Professor, RMC and Associate Scientist, PSLH (also Biochemistry)	FARAGO, PETER J., M.D., Lecturer, RMC
COLEMAN, III, HENRY N., B.S., M.D., Associate Professor, RMC and Associate Attending, PSLH	FELIX, ROBERT E., M.D., Assistant Professor, RMC and Senior Attending, PSLH
COMRIE, JAMES M., M.D., Assistant Professor, RMC, CH	FISCHER, CONRAD S., B.S., M.D., Assistant Professor, RMC, CMH
CONRAD, DANIEL E., B.S., M.D., Assistant Professor, RMC, SCH	FLANAGAN, GEORGE C., M.D., Associate Professor, RMC and Senior Attending, PSLH
CONTRO, STEPHEN, M.D., Assistant Professor, RMC, GCH	FOX, JACOB H., M.D., Assistant Professor, RMC and Assistant Attending, PSLH (also Neurological Sciences)
COOGAN, JR., THOMAS J., B.S., M.D., Associate Professor, RMC and Associate Attending, PSLH	FRANKLIN, JAMES L., B.S., M.D., Assistant Professor, RMC and Assistant Attending, PSLH
COTTS, G. WILLIAM, B.S., M.D., Associate Professor, RMC, CMH	FREEDMAN, PHILIP, M.R.C.S., M.R.C.P., Professor, RMC, MSHMC
CUADROS, HUGO F., B.S., M.D., Assistant Professor, RMC, CH	FRIED, WALTER, M.D., Visiting Associate Professor, RMC and Consultant, PSLH
DE ROSE, WILLIAM F., A.B., M.D., Assistant Professor, RMC, CH	FRISCHER, HENRI, M.D., Associate Professor, RMC and Associate Attending, PSLH (also Pharmacology)
DEAM, MALCOLM, B.A., M.D., Instructor, RMC and Adjunct Attending, PSLH, MSHMC	GALT, RAYMOND M., A.B., M.D., Assistant Professor, RMC and Associate Attending, PSLH
DEDERICK, MARGARIDA M., B.S., M.D., Instructor, RMC and Adjunct Attending, PSLH (also Psychiatry)	GARLAND, JOHN T., B.A., M.D., Assistant Professor, RMC and Assistant Attending, PSLH
DE JONG, GEORGE, B.A., M.D., Instructor, RMC and Assistant Attending, PSLH	GARR, WILLIAM R., B.A., M.D., Associate, RMC and Assistant Attending, PSLH
DEVETSKI, ROBERT L., M.D., Visiting Assistant Professor, RMC and Assistant Attending, PSLH	GASTEYER II, THEODORE H., A.B., M.D., Assistant Professor, RMC, CH
DE YOUNG, HENRY D., B.S., M.D., Associate Professor, RMC and Senior Attending, PSLH	GDALMAN, LOUIS, B.S., Ph.D., Emeritus Professor, RMC and Associate Attending, PSLH (also Pharmacology)
DHAR, S.K., M.B.B.S., M.D., Assistant Professor, RMC, MSHMC	GEWURZ, HENRY, A.B., M.D., Professor, RMC and Senior Attending, PSLH (also Pediatrics and Immunology)
DI FILIPPO, MARY E., B.S., M.D., Instructor, RMC, CH	GLICKMAN, PAUL B., Ph.D., M.D., Associate Professor, RMC and Senior Attending, PSLH
DOW, JAMES W., M.D., Professor, RMC and Senior Attending, PSLH	GOLDEN, HARVEY E., B.A., M.D., Assistant Professor, RMC and Associate Attending, PSLH (also Immunology)
DOWLING, HARRY F., M.D., Emeritus, RMC and Emeritus, PSLH	GOLDSTEIN, MAURICE S., M.D., Professor, RMC and Consultant, PSLH
DWARAKANATHAN, ARCOT A., M.D., Instructor, RMC and Adjunct Attending, PSLH (also Preventive Medicine)	GORDON, DONALD L., B.S., M.D., Associate Professor, RMC, MSHMC
EAGEN, JEREMIAH W., B.S., M.D., Instructor, RMC and Adjunct Attending, PSLH	GRAETTINGER, JOHN S., M.D., Professor, RMC and Senior Attending, PSLH
EARLE, RICHARD H., B.A., M.S., M.D., Associate Professor, RMC, CH	GREGORY, STEPHANIE A., M.D., Associate Professor, RMC and Assistant Attending, PSLH
ECONOMOU, PETER G., B.S., M.S., M.D., Assistant Professor, RMC and Associate Attending, PSLH	HAHNEMAN, BETTY M., B.S., M.D., Associate Professor, RMC, MSHMC
EDELBERG, DAVID K., M.D., Assistant Professor, RMC and Assistant Attending, PSLH	HARRIS, ALAN A., M.D., Assistant Professor, RMC and Assistant Attending, PSLH
EPSTEIN, ROBERT B., B.S., M.D., Visiting Lecturer, RMC and Consultant, PSLH	HAUSER, ROBERT G., B.S., M.D., Assistant Professor, RMC and Assistant Attending, PSLH
ERLENBORN, JAMES, M.D., Instructor, RMC, CDH	
EVANS, THELMA J., B.S., M.D., Instructor, RMC and Adjunct Attending, PSLH	

## **Internal Medicine . . .**

- HEDBLOM, CARL A., A.B., M.D.,  
Associate Professor, RMC and Senior  
Attending, PSLH
- HEGYVARY, CSABA, M.D., Associate  
Professor, RMC and Associate  
Scientist, PSLH (also Physiology)
- HELLER, PAUL, M.D., Visiting  
Professor, RMC and Consultant, PSLH
- HERTKO, LEONARD J., M.D.,  
Associate Professor, RMC and  
Associate Attending, PSLH
- HEYMANN, MARK, B.S., M.D.,  
Instructor, RMC, CDH
- HIBBS, WILLIAM G., M.D., Emeritus,  
RMC and Emeritus, PSLH
- HIGHSTONE, WILLIAM H., B.S., M.D.,  
Emeritus, RMC and Emeritus, PSLH
- HOELTGEN, THOMAS M., B.A., M.D.,  
Instructor, RMC and Assistant  
Attending, PSLH
- HOEPPNER, WALTER F., B.S., M.D.,  
Emeritus, RMC and Emeritus, PSLH
- HORWITT, MAX K., Ph.D., Visiting  
Professor, RMC and Consultant,  
PSLH
- HUDSON, EDSEL K., B.S., M.D.,  
Associate Professor, RMC and Senior  
Attending, PSLH (also Preventive  
Medicine)
- HUSS, KATHRYN S., A.B., M.D.,  
Instructor, RMC, MSHMC
- JAMIESON, RODNEY A., B.S., M.D.,  
Associate, RMC and Assistant  
Attending, PSLH
- JENNINGS, JOHN C., B.A., M.D.,  
Assistant Professor, RMC and Assistant  
Attending, PSLH
- JENSON, DONALD M., B.S., M.D.,  
Instructor, RMC and Adjunct  
Attending, PSLH
- JOHNSON, ROBERT E., Ph.D., M.D.,  
Visiting Professor, RMC and Consultant,  
PSLH
- JONES, FRANK W., A.B., M.D.,  
Assistant Professor, RMC and  
Consultant, PSLH
- JONES, JOHN C., B.S., M.D., Instructor,  
RMC and Assistant Attending, PSLH
- JONES, JOHN VERRIER, B.A., B.M.,  
B.Ch., F.R.C.P., Professor, RMC  
and Senior Attending, PSLH
- JONES, PHILIP N., M.D., Professor,  
RMC and Senior Attending, PSLH
- JUPA, JAMES E., B.S., M.D., Assistant  
Professor, RMC and Assistant  
Attending, PSLH
- KAGANIEC, IRENE G., M.D., Associate  
Professor, RMC, CH
- KANG, BANN, B.A., M.D., Assistant  
Professor, RMC, MSHMC
- KARK, ROBERT M., B.A., F.R.C.P.,  
Professor, RMC and Senior Attending,  
PSLH
- KASSRIEL, ROBERT S., A.B., M.D.,  
Instructor, RMC and Assistant  
Attending, PSLH
- KELLY, JR., FRANK B., B.S., M.D.,  
Associate Professor, RMC and Senior  
Attending, PSLH
- KELLY, SR., FRANK B., B.S., M.D.,  
Emeritus, RMC and Emeritus, PSLH
- KEOMUAN, POONSRI, M.D.,  
Instructor, RMC and Adjunct Attending,  
PSLH
- KESLER, R. LINCOLN, A.B., M.D.,  
Associate Professor, RMC and Senior  
Attending, PSLH
- KAHN, ABDUL K., M.B.B.S.,  
Instructor, RMC and Adjunct  
Attending, PSLH
- KIDEREA, GEORGE J., B.S., M.D.,  
Professor, RMC, CMH
- KINNEY, JANET, B.S., M.D., Emeritus,  
RMC and Emeritus, PSLH
- KIRBY, WILLIAM J., M.D., Emeritus,  
RMC and Emeritus, PSLH
- KIRKLAND, WALLACE W., A.B.,  
M.D., Associate Professor, RMC and  
Senior Attending, PSLH
- KLINGER, ALFRED D., B.S., M.D.,  
Associate, RMC and Senior Attending,  
PSLH (also Preventive Medicine)
- KNOSPE, WILLIAM H., B.A., B.S.,  
M.S., M.D., Professor, RMC and Senior  
Attending, PSLH
- KNOTT, JR., A. PAUL, A.B., M.D.,  
Instructor, RMC and Adjunct  
Attending, PSLH
- KOFMAN, SIDNEY, M.D., Visiting  
Professor, RMC and Senior Attending,  
PSLH
- KORNEL, LUDWIG, Ph.D., M.D.,  
Professor, RMC and Senior Attending,  
PSLH (also Biochemistry)
- KRASNOW, SHELDON E., B.S., M.D.,  
Professor, RMC, WSH
- LAING, GRANT H., M.D., Emeritus,  
RMC and Emeritus, PSLH
- LASHOF, JOYCE C., M.D., Professor,  
RMC and Senior Attending, PSLH,  
LOA (also Preventive Medicine)
- LEE, CHANG LING, M.D., Professor,  
RMC, MSHMC (also Pathology)
- LEE, WILLIAM K., B.A., M.D.,  
Instructor, RMC, CDH
- LEPPER, MARK H., B.A., M.D.,  
Professor, RMC and Senior Attending,  
PSLH (also Preventive Medicine)
- LEV, MAURICE, B.S., M.A., M.D.,  
Distinguished Professor, RMC  
(also Pediatrics)
- LEVIN, STUART, B.M., M.D.,  
Associate Professor, RMC and Senior  
Attending, PSLH (also Microbiology and  
Preventive Medicine)
- LEVINE, CHARLOTTE C., B.A., M.D.,  
Instructor, RMC and Adjunct  
Attending, PSLH (also Preventive  
Medicine and Family Practice)
- LEVINE, MILTON D., B.A., Sc.D., M.D.,  
Associate Professor, RMC and  
Senior Attending, PSLH (also  
Preventive Medicine)
- LEVITAN, RUVEN, M.D., Professor,  
RMC, SCH, WSH
- LEWIS, EDMUND J., B.S., M.D.,  
Professor, RMC and Senior Attend-  
ing, PSLH

## **Internal Medicine . . .**

LIEBSON, PHILIP R., A.B., M.D.,	MUEHRKE, ROBERT C., B.S., M.D.,
Associate Professor, RMC and	Associate Professor, RMC and
Associate Attending, PSLH	Consultant, PSLH, WSH
LIM, TOH HOAI, B.S., M.B.B.S.,	MUENSTER, JOSEPH J., M.D.,
Instructor, RMC, SCH	Associate Professor, RMC and Senior
LUNDY, CLAYTON J., B.S., M.S.,	Attending, PSLH (also Pediatrics)
M.D., Emeritus, RMC and Emeritus,	MULLERHEIM, KATHLEEN B., B.S.,
PSLH	M.A. Lecturer, RMC
MAHAN, KATHLEEN, B.S., M.S.,	NATHAN, R. DEVA., M.D., Instructor,
Lecturer, RMC and RCN	RMC and Assistant Attending, PSLH
MARTIN, JOHN E., B.S., M.D.,	NEAL, RICHARD H., A.A., M.D.,
Instructor, RMC and Assistant	Associate Professor, RMC, WSH
Attending, PSLH	NELSON, BERTRAM G., B.S., M.D.,
MARTINEZ, CHARLES J., M.D.,	Professor, RMC and Senior Attending,
Assistant Professor, RMC, MSHMC	PSLH
MATTHEW, GUY R., B.A., M.D.,	NOBLE, BARBARA W., B.S., M.D.,
Associate Professor, RMC and Senior	Assistant Professor, RMC and Assistant
Attending, PSLH (also Diagnostic	Attending, PSLH (also Preventive
Radiology)	Medicine)
MATTIS, RICHARD C., B.S., M.D.,	NORTHROP, GRETAJO, B.S., M.S.,
Instructor, RMC and Assistant	Ph.D., M.D., Assistant Professor, RMC
Attending, PSLH	and Assistant Attending, PSLH (also
McKENNA, WILLIAM W., B.S., M.D.,	Obstetrics and Gynecology)
Assistant Professor, RMC, CH	O'BRIEN, DONALD E., A.B., M.D.,
McCREARY, PATRICIA A., M.D.,	Associate Professor, RMC and
Associate Professor, RMC and Associate	Associate Attending, PSLH
Attending, PSLH (also Preventive	O'BRIEN, JOHN F., B.S., M.D.,
Medicine)	Associate Professor, RMC, CH
McFATE, PATRICIA, Ph.D., Visiting	O'DONOGHUE, JOHN K., B.S., M.D.,
Associate Professor, RMC and	Assistant Professor, RMC, WSH
Consultant, PSLH	OYAMA, JOSEPH H., B.S., M.D.,
McKENNA, RAJALAXMI, M.D.,	Assistant Professor, RMC and Assistant
Assistant Professor, RMC and	Attending, PSLH, CH
Assistant Attending, PSLH	PARSONS, ROBERT L., M.D., Visiting
McLEOD, BRUCE C., Assistant	Assistant Professor, RMC and
Professor, RMC and Assistant	Adjunct Attending, PSLH
Attending, PSLH	PASSOVOY, ROBERT D., B.S., M.D.,
McMILLAN, J. CHARLES, M.D.,	Instructor, RMC and Adjunct
Emeritus, RMC, WSH	Attending, PSLH
MEDENIS, VIDVUDS, M.D., Assistant	PAUL, OGLESBY, M.D., Visiting
Professor, RMC and Assistant	Professor, RMC and Consultant,
Attending, PSLH	PSLH
MEREDITH, PAUL A., A.B., M.D.,	PAYNE, JOHN A., B.S., M.D., Assistant
Associate Professor, RMC and Assistant	Professor, RMC and Assistant
Attending, PSLH	Attending, PSLH
MERKEL, FREDERICK K., B.S., M.D.,	PETERSON, ARTHUR, R., M.D.,
Associate Professor, RMC and	Associate, RMC, SCH
Associate Attending, PSLH (also	PHELAN, WILLIAM H., B.S., M.D.,
General Surgery and Immunology)	Associate Professor, RMC and Senior
MERWICK, PATRICIA A., B.S., M.D.,	Attending, PSLH
Assistant Professor, RMC and Adjunct	PIERCE, MILA I., M.D., Distinguished
Attending, PSLH	Professor, RMC and Consultant, PSLH
(also Pediatrics)	(also Pediatrics)
MESSER, JOSEPH V., A.B., M.D.,	POMERANTZ, RHODA S., A.B., M.D.,
Professor, RMC and Senior Attending,	Assistant Professor RMC and Associate
PSLH	Attending, PSLH (also Preventive
MEYER, JOHN H., M.D., Associate	Medicine)
Professor, RMC and Assistant	PONSIGLIONE, JOHN D., B.S., M.D.,
Attending, PSLH	Instructor, RMC and Assistant
MONEER, YUSEF, M.D., Assistant	Attending, PSLH
Professor, RMC, CMH	POST, JOHN, M.D., Visiting Assistant
MOON, BYONG H., B.S., M.S. Ph.D.,	Professor, RMC and Emeritus, PSLH
Assistant Professor, RMC and	POWERS, RICHARD J., B.S., M.D.,
Assistant Scientist, PSLH (also	Assistant Professor, RMC and Associate
Pharmacology)	Attending, PSLH (also Pharmacology)
MOORE, WILLIAM A., M.D., Assistant	PRANCAN, ARTHUR V., B.S., Ph.D.,
Professor, RMC, CMH	Assistant Professor, RMC and Assistant
MORRIS, ARTHUR M., B.A., M.D.,	Scientist, PSLH (also Pharmacology)
Instructor, RMC and Adjunct	RAMSEY, MICHAEL M., M.D.,
Attending, PSLH	Instructor, RMC and Assistant
	Attending, PSLH



## **Internal Medicine . . .**

REID, ROBERT H., A.B., M.D., Assistant Professor, RMC and Assistant Attending, PSLH	SLAYTON, ROBERT E., B.S., M.D., Associate Professor, RMC and Senior Attending, PSLH
RENNIE, I. DRUMMOND, M.B., M.D., Associate Professor, RMC and Associate Attending, PSLH	SMITH, EARL C., B.S., M.D., Associate Professor, RMC, MSHMC
REYNOLDS, ROBERT E., B.A., M.D., M.P.H., D.P.H., Associate Professor, RMC and Associate Attending, PSLH	SNAPP, MARSHALL, B.A., M.D., Associate, RMC and Assistant Attending, PSLH
RIFF, DONALD P., M.D., Assistant Professor, RMC and Assistant Attending, PSLH	SOKALSKI, STEVEN J., B.S., D.O., Visiting Associate Professor, RMC and Consultant, PSLH
ROBERTS, JIMMY L., A.B., M.D., Instructor, RMC and Adjunct Attending, PSLH	SOKOL, NORTON M., B.A., M.D., Assistant Professor, RMC, MSHMC
ROOT, THOMAS E., B.S., M.D., Instructor, RMC and Adjunct Attending, PSLH	SOMBERG, ALVIN, B.A., M.D., Assistant Professor, RMC, SCH
ROSENBERG, MARVIN S., B.S., M.D., Associate Professor, RMC and Senior Attending, PSLH	STAMLER, JEREMIAH, M.D., Visiting Professor, RMC and Consultant, PSLH
ROSENBLATE, HOWARD J., B.A., M.D., Assistant Professor, RMC and Consultant, PSLH	STAVINGA, RONALD F., M.D., Instructor, RMC and Adjunct Attending, PSLH
ROSKELLEY, RIGBY C., B.S., M.D., Professor, RMC and Senior Attending, PSLH	STEINBERG, HAROLD H., M.D., Associate Professor, RMC and Senior Attending, PSLH (also Preventive Medicine)
RO滕ENBERG, MORRY L., B.Sc., M.D., Instructor, RMC and Adjunct Attending, PSLH	STUPPY, GEORGE W., B.S., M.S., Ph.D., M.D., Emeritus, RMC and Senior Attending, PSLH
RYAN, WILL G., M.D., Associate Professor, RMC and Senior Attending, PSLH	SUSMANO, ARMANDO, M.D., Assistant Professor, RMC and Associate Attending, PSLH, MSHMC
SANTUCCI, BARBARA, B.A., M.D., Assistant Professor, RMC and Assistant Attending, PSLH (also Pediatrics)	TARUN, DONALD W., B.A., B.S., M.D., Associate Professor, RMC and Senior Attending, PSLH
SASSETTI, RICHARD J., M.D., Assistant Professor, RMC and Senior Attending, PSLH	TARZYNSKI, MARIAN S., M.D., Assistant Professor, RMC and Associate Attending, PSLH
SCHEINER, DAVID L., B.A., M.D., Assistant Professor, RMC and Assistant Attending, PSLH (also Preventive Medicine)	TAUSK, KASRIEL, M.D., Assistant Professor, RMC and Senior Attending, PSLH
SCHICK, ARMIN F., M.D., Visiting Assistant Professor, RMC and Consultant, PSLH	TAYLOR, SAMUEL G., A.B., M.D., Emeritus, RMC and Emeritus, PSLH
SCHOENBERGER, JAMES A., B.S., M.D., Professor, RMC and Senior Attending, PSLH (also Preventive Medicine)	THOMPSON, RAY E., B.A., M.D., Assistant Professor, RMC, GCH
SCHUESSLER, ROGER R., M.D., Assistant Professor, RMC and Senior Attending, PSLH	THOMSON, ANDREW, B.S., M.D., Associate Professor, RMC and Senior Attending, PSLH
SCHWARTZ, THEODORE B., B.S., M.D., Professor, RMC and Senior Attending, PSLH	THOMSON, CAMERON, B.S., M.D., Instructor, RMC and Adjunct Attending, PSLH
SCUPHAM, WILLIAM K., A.B., M.D., Assistant Professor, RMC and Consultant, PSLH	TOLCHIN, NATHAN, B.A., D.O., Instructor, RMC and Adjunct Attending, PSLH
SHALLAT, CHARLES H., B.S., M.D., Assistant Professor, RMC and Assistant Attending, PSLH	TOMAN, MARALYN E., B.S., M.D., Instructor, RMC, MSHMC
SHARON, ZEEV, M.D., Instructor, RMC and Adjunct Attending, PSLH	TRENHOLME, GORDON M., M.D., Assistant Professor, RMC and Assistant Attending, PSLH (also Pharmacology)
SHOWEL, JOHN L., B.S., M.D., Assistant Professor, RMC and Assistant Attending, PSLH	TROBAUGH, JR., FRANK E., B.A., M.D., Professor, RMC and Senior Attending, PSLH
SILINS, VITOLDS R., M.D., Assistant Professor, RMC and Associate Attending, PSLH	TUCKER, W. RANDOLPH, A.B., M.D., Associate Professor, RMC and Associate Attending, PSLH
	TWISS, ALSTON C., B.A., M.D., Associate Professor, RMC and Assistant Attending, PSLH
	TYSZKA, THOMAS S., M.D., Assistant Professor, RMC and Assistant Attending, PSLH

## **Internal Medicine . . .**

VAN VALEN, PHEBE, B.S., M.A., Ph.D., Lecturer, RMC	WOLFE, CHARLES K., A.B., M.D., Associate Professor, RMC and Senior Attending, PSLH
WAKEFIELD, HOWARD, S.B., M.D., Emeritus, RMC and Emeritus, PSLH	WOLTER, JANET, A.B., M.D., Associate Professor, RMC and Senior Attending, PSLH
WANG, TIMOTHY, M.B.B.S., Assistant Professor, RMC, MSHMC	WONG, PAUL W., M.D., MSc., Professor, RMC and Senior Attending, PSLH (also Pediatrics)
WAXMAN, JORDAN, B.S., M.D., Assistant Professor, RMC and Assistant Attending, PSLH (also Neurological Sciences)	WOOD, WILLARD L., M.S., M.D., Emeritus, RMC and Emeritus, PSLH
WERNER, PETER, M.D., Assistant Professor, RMC and Assistant Attending, PSLH	YELLEN, HARRY J., B.S., M.D., Assistant Professor, RMC, MSHMC
WESTERMAN, MAXWELL P., B.A., M.D., Professor, RMC, MSHMC	ZEITZ, HOWARD J., M.D., Assistant Professor, RMC and Assistant Attending, PSLH (also Immunology)
WING, HERMAN, B.A., M.D., Professor, RMC, CH	ZITNIK, RALPH S., B.S., M.D., Associate Professor, RMC and Associate Attending, PSLH
WINTER, PAUL L., B.S., M.D., Associate Professor, RMC and Senior Attending, PSLH	

The Department of Internal Medicine includes the Sections of Cardiology, Digestive Diseases, Endocrinology and Metabolism, Geriatrics, Clinical Hematology, Laboratory Hematology, Infectious Diseases, Nephrology, Oncology, Pulmonary Medicine, and Rheumatology.

The department provides an integrated program of post-doctoral residency training in Internal Medicine which consists of a one-year internship ( $R^1$ ) and two subsequent years of residency ( $R^2$  and  $R^3$ ). An additional year of advanced training with teaching responsibility and an adjunct Medical Staff appointment is offered in a Chief Residency.

The internship year is structured to provide intensive patient contact utilizing some 300 medical beds divided into six general medical units, a Medical Intensive Care Unit, and a Surgical Intensive Care Unit. This year is divided into four two-month rotations on general medical units, which have from 30 to 47 patients. Each general medical unit is staffed by one or two residents, three medical interns, and several Rush Medical College students. One month is devoted to medical and one month to surgical intensive care experiences. A final two-month period is allotted to elective

study, which may be taken in any medical or surgical subspecialty, or in pediatrics, psychiatry, or neurology.

In the second year, a resident spends six months on a general medical unit, two months of Emergency Room-Triage experience, and the remainder on elective services.

The third-year resident spends one to three two-month rotations on a general medical unit and the rest of the year in the subspecialty areas of his or her choice. Throughout the training period, each medical house officer is assigned one half-day a week to a medical practice. This continuing assignment provides the physician with the opportunity to provide long-term care.

With the expansion of the Rush-Presbyterian-St. Luke's Medical Center to include affiliated network hospitals, the department has expanded its training potential to include medical unit experience in a community hospital setting. House officers may spend limited periods of time at affiliated institutions with approved programs in internal medicine, including, at present, Christ Hospital and the Mount Sinai Hospital Medical Center. Moreover, the refurbished Sheri-

## **Internal Medicine . . .**

dan Road Pavilion, an integral part of Presbyterian-St. Luke's Hospital, provides 80 general medical beds in a community hospital. The house staff education program there is under the direction of a newly appointed Assistant Chairman of Medicine and is integrated with the house-staff training program at Presbyterian-St. Luke's Hospital. These activities have added depth in primary patient care experience.

The Department of Medicine schedules regular teaching sessions which include Medical Grand Rounds, a medical subspecialty lecture series, Attending and Shock Rounds, and

Morbidity and Mortality Conferences. It sponsors a Biology in Medicine Seminar designed to promote in-depth study of selected clinical or research areas in medicine. The department has recently added a bimonthly Journal Club to these sessions.

Individualization of programs is encouraged and other post-graduate programs are available, including elective rotations through ENT, office gynecology, ophthalmology, and psychiatry for internists. Further intensive care experiences beyond the residency are available in the clinical and research fellowships offered by the various sections.

## *Section of Cardiology*

**MESSER, JOSEPH V., M.D.**, Director  
**BATTLE, WILLIAM E., M.D.**  
**CHHABLANI, RAMESH, M.D.**  
**CLARK, JAMES G., M.D.**  
**CODINI, MICHELE A., M.D.**  
**COLANDREA, MICHAEL A., M.D.**  
**COLEMAN, HENRY N., M.D.**  
**EYBEL, CARL E., M.D.**  
**HAUSER, ROBERT G., M.D.**  
**HEGYVARY, CSABA, M.D.**  
**LIEBSON, PHILIP R., M.D.**  
**MUENSTER, JOSEPH J., M.D.**

The Section of Cardiology provides consultation and diagnostic services for patient care, teaches medical students and postgraduates, and conducts research studies. Section personnel include the full-time section staff, practicing attending physicians, fellows, residents in medicine, fourth-year medical students who rotate on an elective basis, and qualified cardiovascular nurses and technicians.

The section includes the catheterization, cardiovascular monitoring, graphics measurement, and electrocardiographic units, in addition to laboratories for blood and air analyses. The section director also administers the Medical Intensive Care/Coronary Care Unit for the Department of Medicine. An animal laboratory is available for cardiovascular studies.

**RIFF, DONALD P., M.D.**  
**ROSENBERG, MARVIN S., M.D.**  
**SUSMANO, ARMANDO, M.D.**  
**TYSZKA, THOMAS S., M.D.**  
**ZITNIK, RALPH S., M.D.**  
**DOW, JAMES W., M.D.**, Consultant  
**GRAETTINGER, JOHN S., M.D.**,  
Consultant  
**SCHOENBERGER, JAMES A., M.D.**,  
Consultant

Medical residents are assigned patients whom they evaluate with the attending physicians. They interpret electrocardiograms and angiographic and graphic data with guidance from the attending staff. Emphasis is placed on objective evaluation of cardiac physiology.

The cardiology fellows supervise hemodynamic monitoring and cardiac care in the Medical Intensive Care Unit and perform diagnostic cardiac catheterization in the Cardiac Catheterization Laboratory. They also undertake clinical and laboratory investigative studies.

The section conducts research on the natural history of cardiac disease, quantification of ventricular function by invasive and noninvasive techniques, application of electrophysiologic principles to the study of man, and diagnosis and modification

## *Cardiology . . .*

of hemodynamic abnormalities.

The section conducts formal teaching exercises in cardiology, consultation rounds, and daily cardiac reports.

Cardiology fellowships are available upon completion of three years of postgraduate training in Internal Medicine. It is expected that applicants for cardiology fellowship are board-eligible in Internal Medicine. At the conclusion of

two years of cardiology fellowship, the applicants will be board-eligible in the subspecialty of cardiovascular diseases. In addition, through a cooperative effort between the Department of Physiology and the Section of Cardiology, postdoctoral candidates in the Department of Physiology may avail themselves of the academic facilities of the Section of Cardiology.

## *Rush Network Members*

Members of the Rush Network having cardiologists with faculty appointments include the following: Mount Sinai Hospital Medical Center, Dr. Armando Susmano and Dr. Maria Balkoura; Swedish Covenant Hospital, Dr. William Andrews; Community Memorial General Hospital, Dr. G. William Cotts and Dr. James A. Schoenberger; West Suburban Hospital, Dr. Kevin O'Donoghue; Central DuPage Hospital, Dr. Neal Agruss; Christ Hospital, Dr. R. Falicov.

Medical students are invited

to participate in cardiology electives at these Rush Network hospitals. A regular Evening of Cardiology has been scheduled involving cardiologists from the Rush Network hospitals and Presbyterian-St. Luke's Hospital. Cardiology Fellows at Rush-Presbyterian-St. Luke's Medical Center have taken elective time at Swedish Covenant Hospital, where they have participated in the cardiac rehabilitation program under the direction of Dr. Noel Nequin.

## *Section of Digestive Diseases*

**PAYNE, JOHN A., M.D., Acting Director**

The Section of Digestive Diseases includes two units:

**PAYNE, JOHN A., M.D., Head  
JONES, PHILIP N., M.D.**

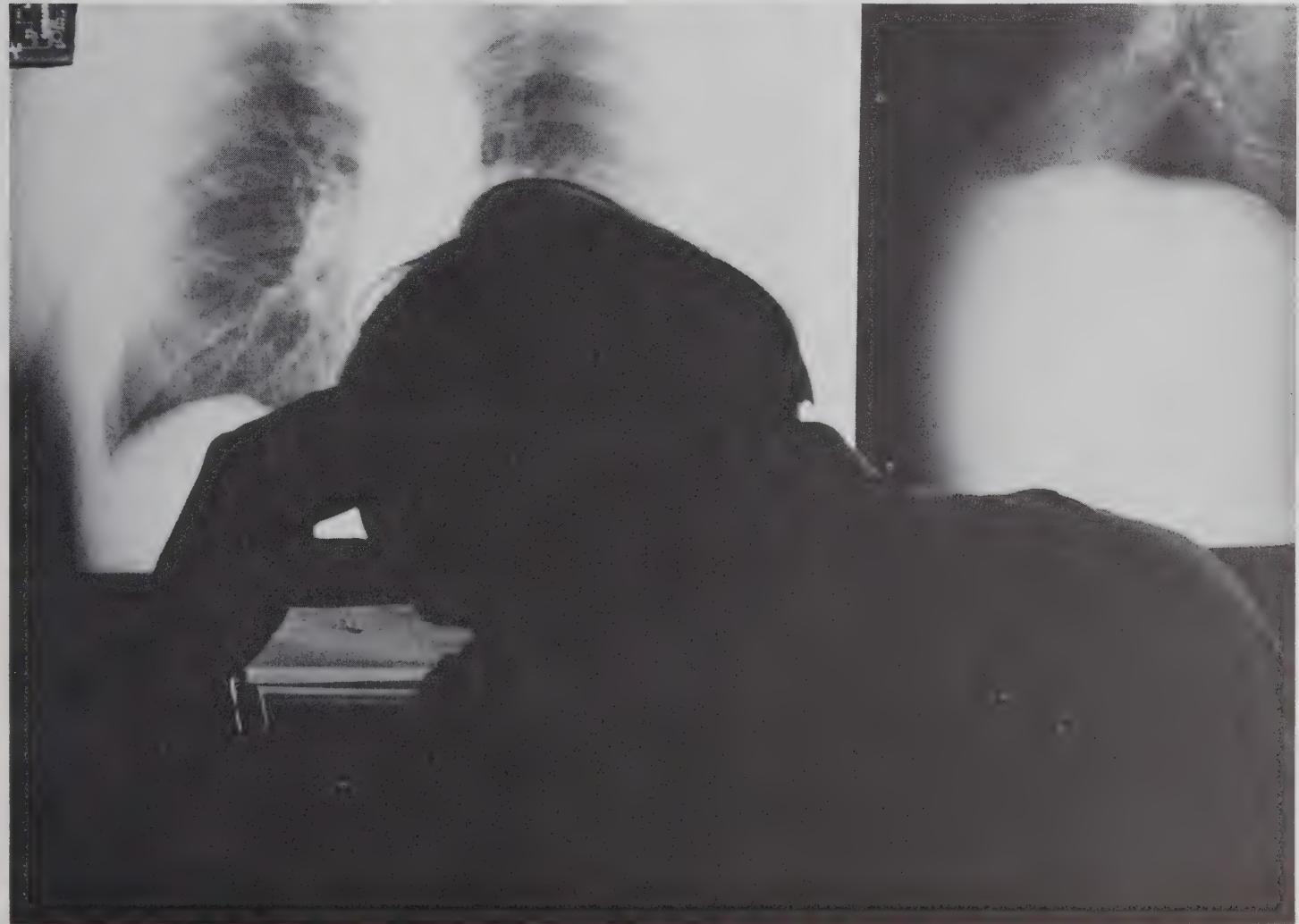
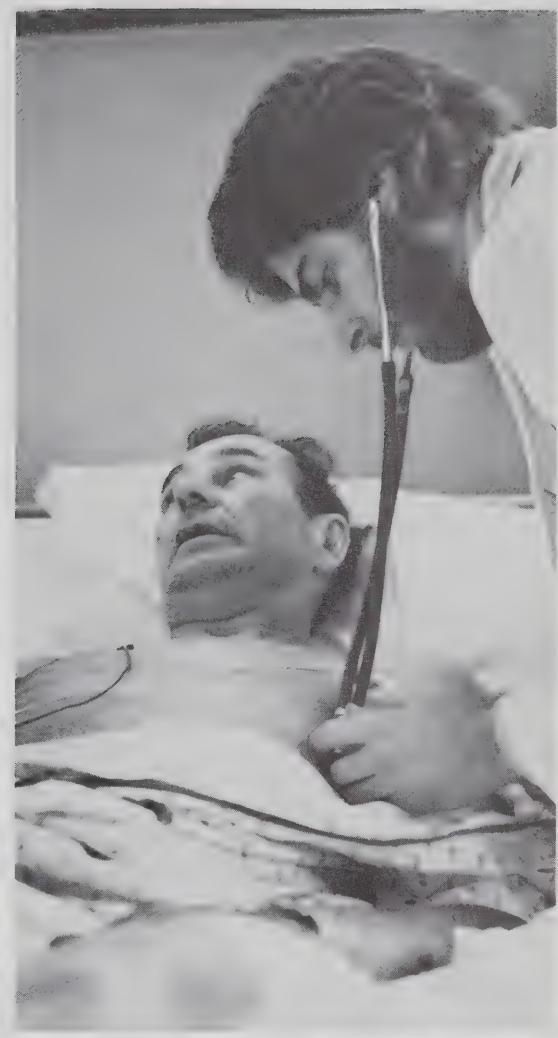
The study of liver disease as pursued in the Liver Unit involves consultation, care, and investigation of clinical problems as well as laboratory investigation of the liver and its diseases.

Medical residents electing experience in the unit see patients in consultation and, after appropriate training, perform liver biopsies when indicated. They may also take an active part in clinical or basic research. Formal teaching activities include hepatology rounds, liver biopsy study sessions, and a weekly Hepatology-GI Pathology conference. There is a close working rela-

the Liver Unit; and the Gastrointestinal Unit.

tionship with the alcoholism treatment unit of the Department of Psychiatry.

Research is primarily oriented to the study of the etiology and pathogenesis of human viral hepatitis. In addition to the study of patients, this involves work with marmosets (small South American primates) and a variety of *in vitro* micro-biological systems. These studies are carried out in collaboration with the Departments of Microbiology and Rheumatology. Other areas of interest include the hepatic effects of drug use, drug and alcohol addiction, and the natural history, cause, and appropriate treatment of chronic active hepatitis.



## Liver Unit . . .

Fellowships are available in the unit for individuals who have completed two years of medical residency. Research fellowships (ideally two years) are also available and involve collaborative work between the section and

one of the basic science departments.

The Liver Unit presents monthly CPC excises to the house staff at Sheridan Road Pavilion and Christ Hospital.

## Gastrointestinal Unit

**FRANKLIN, JAMES L., M.D.,**  
Acting Head  
**PONSIGLIONE, JOHN, M.D.**

The Gastrointestinal Unit provides consultation for patients with diseases of the gastrointestinal tract, specialized diagnostic laboratory and clinical procedures, and formal and informal teaching of house staff and medical students in gastrointestinal disease.

Medical residents see all patients requiring consultation and participate in endoscopic and other diagnostic procedures.

Reviews of pertinent x-rays give experience and interpretation of films concerned with the gastrointestinal tract.

Fellowships are available through the Section of Digestive Diseases. Fellows share substantially in the consultation and teaching program with participation in clinical and basic research. Facilities are available for a wide range of research activities; projects of interest to individual fellows may be arranged with personnel in the unit and in other departments.

## *Section of Endocrinology and Metabolism*

**SCHWARTZ, THEODORE B., M.D.,**  
Director  
**RYAN, WILL G., M.D., Associate Director**  
GARLAND, JOHN T., M.D.  
JENNINGS, JOHN C., M.D.  
KORNEL, LUDWIG, M.D., Ph.D.  
NORTHROP, GRETAJO, M.D., Ph.D.

The Section of Endocrinology and Metabolism takes a broad yet intensive approach to clinical, investigative, and laboratory aspects of the discipline. In addition to providing consultations for patients, the section maintains a clinical endocrinology laboratory to perform serum thyroxine, protein-bound iodine, insulin, growth hormone, parathyroid hormone, and a variety of serum lipid determinations.

There is active research on diabetes, somatomedin,

metabolic bone disease, and disorders of growth, including investigations of patients housed in the Rice Metabolic Research Unit. The Steroid Unit of the section performs determinations of serum and urinary steroids of various types and conducts a research program on steroid metabolism in essential hypertension.

The teaching program is active at all levels. In addition to regularly scheduled endocrinology conferences, the section accepts four medical students during the alternate quarter, one clinical and research fellow who functions for a minimum of two years, and one or two medical residents who rotate through the section at two-month intervals.

## *Section of Geriatrics*

**POMERANTZ, RHODA S., M.D.,**  
M.P.H. Director  
**FOX, JACOB H., M.D.**

The Section of Geriatrics has been concerned primarily with the continuing development of the Johnston R. Bowman Health Center for the Elderly, a comprehen-

sive long term care and residential facility on the Medical Center campus. Construction of the facility was completed in the fall of 1976 and in November the facility became operational. To date, patients are being admitted to 110 of the 176 beds. In addition, 32 apartments for

## *Geriatrics . . .*

elderly who can live independently are available as rental units; these apartments have a strong social and recreational program provided by the Johnston R. Bowman staff. Continued program development is focused primarily on the planning of a geriatric day hospital.

The basic orientations of the Johnston R. Bowman Health Center for the Elderly are rehabilitation, restorative care, and reintegration of the elderly individual into the community. The clinical staff reflects the multidisciplinary nature of restorative care for the elderly and, in addition to a wide variety of para-professionals, includes physicians trained in psychiatry, neurology, physical medicine, and rehabilitation.

Clinical activities of the Section of Geriatrics include clinical care of patients hospitalized on the Johnston R. Bowman in-patient units, consultations on geriatric in-patients, consultations on geriatric outpatients, and direct care for community-based patients. In order to bring community-based care closer to the elderly recipient, out-patient activities also are conducted at the Sheridan Road Pavilion. In addition, a new community outpatient facility at the William Jones Senior Citizens Apartments, 1447 S. Ashland, was opened in January of 1977.

The Clinical and Laboratory Sections of Hematology are both concerned with patient care, research, and training. The two sections coordinate their efforts closely in applying clinical and laboratory diagnostic expertise to patient care, in teaching pre- and post-M.D. and Ph.D. students clinical and laboratory aspects of hematology, and in conducting basic and applied research.

Clinical fellowships are available and provide in-depth

The facility provides medical care to residents of this senior citizens apartment building and to the surrounding community. Direct services are being provided by a nurse clinician who works under careful physician supervision.

Research activities have been directed to the identification of treatable conditions in elderly patients who present with dementia and to the correlation of findings on computerized axial tomography and clinical patient observation. Other projects include an in-depth study of the process of institutionalization, development of a protocol for program evaluation at the Johnston R. Bowman Health Center for the Elderly in cooperation with Medicus Systems, and development of a program for the training of unlicensed personnel in long term care.

Johnston R. Bowman is the clinical site for graduate nursing students in the geriatric/gerontologic master's program. Plans are underway to develop elective rotations for undergraduate and graduate medical education. Teaching conferences occur on a regular basis. Multidisciplinary staffing conferences are held for each patient unit on a weekly basis and a patient oriented psychosocial conference is held weekly.

training in hematology. The programs are designed to prepare fellows for board certification in hematology. Research fellowships are designed to prepare internist-hematologists for a career in academic medicine. Research projects in selected areas of basic and/or clinical hematology are initiated by the research fellow in collaboration with a senior investigator in hematology. Training in experimental design, biostatistics, data analysis and

## *Sections of Hematology*



## Hematology . . .

interpretation, and preparation of research reports is emphasized. In addition, the research fellow continues to participate in selected clinical activities in order to expand his or her clinical expertise. Fellows participate actively in the section's teaching programs, both at the

### Section of Clinical Hematology

**KNOSPE, WILLIAM H.**, Director  
**ADLER, SOLOMON**, M.D.  
**FRISCHER, HENRI**, M.D., Ph.D.  
**GREGORY, STEPHANIE A.**, M.D.  
**McKENNA, RAJALAXMI**, M.D.

The Section of Clinical Hematology has primary responsibility for patient care and consultation in the clinical areas of hematologic malignancies, anemias, coagulation disorders, immunohematology, and non-malignant leukocyte disorders. Clinical responsibilities include primary, secondary, and tertiary levels of patient care. Teaching activities include: (1) daily hospital teaching rounds conducted by a senior hematologist and attended by hematology fellows, medical residents, and medical students on elective rotations in Hematology; (2) weekly patient-oriented clinical conferences; (3) weekly seminars on clinical and basic science topics important to hematology; (4) weekly bone marrow morphology conferences; (5) multidisciplinary Lymphoma and Tumor Conferences; and (6) weekly clinical coagulation conferences. The teaching of hematology to Phase II undergraduate medical students is shared with the Section of Laboratory Hematology during the organ system course in hematology, presented once a year. Elective courses in advanced clinical and laboratory hematology are offered to Phase III medical students. The training of fellows in clinical and laboratory aspects of academic hematology is conducted

undergraduate and post-graduate levels, by conducting seminars, presenting lectures, and conducting teaching rounds.

Applications should be made to Dr. Knospe or Dr. Trobaugh.

**PIERCE, MILA I.**, M.D.  
**SASSETTI, RICHARD J.**, M.D.  
**SHOWEL, JOHN**, M.D.  
**WEENS, JOAN**, M.D.  
**WU, KENNETH K.**, M.D.

collaboratively with the Section of Laboratory Hematology under a training grant from the National Institutes of Health. Programs are being developed to extend clinical consultative activities and teaching activities into the Rush network of community hospitals through periodic visits, teaching conferences, and residency training activities in general internal medicine.

Ongoing research studies in the Section of Clinical Hematology include: (1)  $^{52}\text{Fe}$  studies of radiation-induced marrow aplasia in humans; (2)  $^{52}\text{Fe}$  studies of bone marrow distribution in patients with hemopoietic disorders; (3) cytogenetic studies of bone marrow cells in leukemia; (4) comparative studies of new chemotherapies in acute and chronic leukemia, multiple myeloma, and Hodgkin's and non-Hodgkin's lymphoma (these studies are conducted in cooperation with and as part of the Southeastern Cancer Chemotherapy Group, an association of 20 university hospitals concerned with the development of new and more effective methods for the chemotherapeutic management of malignant disease); and (5) platelet function in patients with thrombocytosis.

## *Section of Laboratory Hematology*

**TROBAUGH, JR., FRANK E., M.D.,  
The Elodia Kehm Director  
of Hematology**  
BACUS, JAMES W., Ph.D.  
COLE, EDMUND R., Ph.D.

The Section of Laboratory Hematology provides the necessary laboratory information to establish diagnoses and provide hematologic measurements for all Medical Center patients. Included in this section is the Blood Bank, which provides full-service blood banking including provision of various component therapies and frozen blood. The Clinical Hematology Laboratory is highly automated and includes a dedicated computer to assist in expediting the reporting of results. Residents in Medicine and Pathology as well as post-doctoral students in Biomedical Engineering pursue their training in these laboratories.

In addition to standard procedures for counting and identifying blood cells, regularly performed diagnostic studies include the determination of red blood cell mass and total blood volume, red blood cell survival time, blood loss in feces or in menstrual flow, iron kinetics, characterization of abnormal proteins, and quantitation of erythrocyte enzymes. A multitude of coagulation screening tests, individual coagulation factor assays, fibrinolytic tests, platelet function studies, and venous thrombosis diagnostic profiles are performed daily and allow an accurate characterization of most bleeding and thrombotic disorders.

Continuing research efforts in the Section of Laboratory Hematology include: (1) studies of factors which regulate the numbers and differentiation of normal hemopoietic stem cells; (2) studies of the kinetics of hemopoietic stem cells in RFM mice with myeloid leukemia; (3) studies of hemopoietic stem

FRISCHER, HENRI, M.D., Ph.D.  
McKENNA, RAJALAXMI, M.D.  
SASSETTI, RICHARD J., M.D.  
WU, KENNETH K., M.D.

cells in S1/S1<sup>d</sup> mice; (4) studies of hemopoietic stem cells in the spleens, marrows, and blood of mice; (5) studies of hemopoietic stem cells in the spleens, marrows, and blood of mice treated with <sup>89</sup>Sr; (6) studies of hemopoietic stem cells and colony stimulating factor in saponin-treated mice; (7) studies of automated acquisition of microscopic images in blood cell identification; (8) studies of specific areas of research concerned with automating the visual inspection processes in the Hematology Laboratory, including: (a) new ways of processing blood in monolayer films on glass slides, (b) quantitation of human observer error in image classification, (c) methods of scene segmentation and description, (d) mathematical techniques of pattern recognition and classification, (e) quantitating estimators of erythrocyte morphology; (9) studies of the biochemistry and physiology of fibrinolytic activators; (10) studies of the biochemistry and physiology of abnormal serum proteins associated with Vitamin K deficiency; (11) studies of <sup>125</sup>I fibrinogen as a diagnostic agent to study the incidence of post-operative phlebothromboses in the legs; (12) studies of the defective hemostasis of open heart surgery; (13) studies of the genetics and biochemistry of erythrocytes; (14) studies of platelet glycoprotein metabolism; (15) studies of methods for measuring circulating platelet aggregates; and (16) studies of platelet immunology.

## *Section of Infectious Disease*

**LEVIN, STUART, M.D., Director**  
**JUPA, JAMES E., M.D., Assistant**  
Director and Chief, Surveillance Unit  
**HARRIS, ALAN A., M.D., Director**  
of Medical Education  
**TRENHOLME, GORDON M., M.D.,**  
Director of Research

The Section of Infectious Disease provides consultation for patients with infectious diseases. It is responsible for continuing surveillance of infections and appropriate preventive activities in all areas of the hospital.

The teaching activities of the section include daily formal and informal consultative rounds. A weekly three hour research and case discussion conference is held.

The developing investigative activities of the section presently concern (1) the study of the epidemiology and control of infections acquired during hospitalization (in this study, the hospital surveillance team's data are a major resource); (2) clinical pharmacological studies of antibacterial chemotherapy; (3) studies on the evolution of antibiotic-resistant organisms; (4) use of Department of Microbiology facilities for investigations in bacteriology and virology; and (5) investi-

**DEAM, MALCOLM A., M.D., Director**  
of Laboratory Research  
**DEVETSKI, ROBERT L., M.D.,**  
Consultant  
**LEPPER, MARK H., M.D., Consultant**  
**WOLFE, CHARLES K., M.D., Consultant**  
**SOKALSKI, STEPHEN, D.O., Consultant**

gation of infectious etiologies of the rheumatic diseases and aplastic anemia. Members of the section serve as consultants to the City of Chicago Department of Health and are involved with rabies control as well as investigations of citywide outbreaks of measles, diphtheria, and meningitis.

Infectious disease consultation to patients hospitalized at the network hospitals is available. Residents from Christ Hospital rotate on our clinical service as an elective part of their training program. Dr. Deam and Dr. Sokalski are staff members at Christ Hospital. Dr. Deam is the Director of Infectious Disease for internal medicine at Mount Sinai Hospital and Dr. Harris has recently assumed the position of Clinical Director of Internal Medicine at the Sheridan Road Pavilion of Rush-Presbyterian-St. Luke's Medical Center.

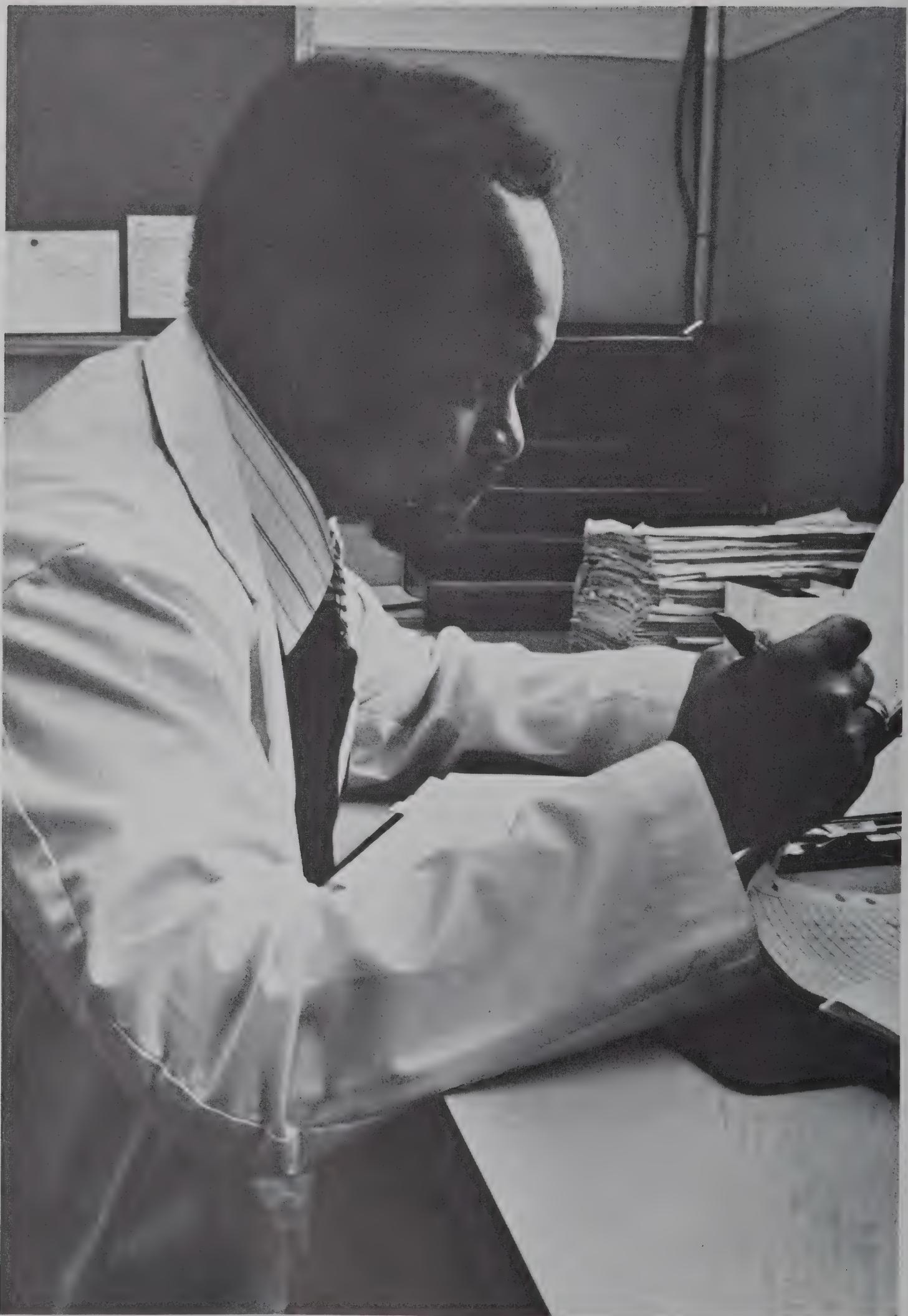
## *Section of Nephrology*

**LEWIS, EDMUND J., M.D. Director**  
**RENNIE, I. DRUMMOND, M.D.,**  
Associate Director

Patients with hypertension, diseases of the kidneys and genitourinary tract, or electrolyte and metabolic problems are studied by the staff of the Nephrology Section. The laboratories of the unit are available for many special studies, including immunological investigations and renin assays. There are active acute and chronic dialysis programs. Patients with chronic intermittent dialysis or transplantation are cared for by the staff of the section. Metabolic aspects of hemodialysis are being investigated in the

latter patients. Close associations exist with the Departments of Pathology, Surgery, Urology, Radiology, and Preventive Medicine in teaching, patient care, and research. The section is pursuing active research on immunological aspects of renal disease and on hypertension. In addition, cooperative studies in the field of high altitude physiology have been conducted with colleagues in Peru, Nepal, and Canada.

Each day the staff teaches at patients' bedsides and there are daily clinical conferences with the renal pathologists to review tissues from patients who have had renal biopsies. Each week there are regular



## *Nephrology . . .*

research meetings, a Renal-Urologic-Radiologic Conference, and a Nephrology Conference.

Members of the resident staff are assigned to the section for two months at a time and research fellowships are available at the end of the second

year of residency training. Usually there are from four to six research fellows in the section who assist in outpatient and inpatient teaching and patient care. Applications for fellowships should be made to the director of the section.

## *Section on Oncology*

**WOLTER, JANET, M.D., Acting Director**  
**ANDERSON, KENNING, M.D., Ph.D.**  
**HOELTGEN, THOMAS, M.D.**  
**ROSSOF, ARTHUR H., M.D.**

To the medical student, the intern, the resident, and many older physicians, the word "cancer" implies a relentless, painful, and ultimately fatal illness. Such an attitude frequently leads to neglect and indifference to the special needs of the cancer patient. In addition to demonstrating new techniques for early diagnosis and treatment, the educational program of the Section of Oncology emphasizes that patients with cancer may live long, productive, and useful lives if properly treated. Each year, the Section of Oncology sees 1200 new cancer patients, who provide an ample and varied spectrum of oncological problems. The residents and fellows will be able to follow and study these patients under the direction of members of the section. New patients and problems are routinely discussed at biweekly section meetings.

The section's program stresses the importance of a combined approach to tumor therapy using the resources of the Departments of Surgery, Therapeutic Radiology, Pathology, and Nuclear Medicine.

**SHOWEL, JOHN, M.D.**  
**SLAYTON, ROBERT E., M.D.**  
**TAYLOR II, SAMUEL G., M.D.,**  
Consultant

Each week there is a Tumor Conference, Lymphoma Conference, and Gynecologic Tumor Conference, which are working examples of the section's interdisciplinary approach to the problems of cancer patients. In addition, the section is involved in many of the clinical trials sponsored by the Eastern Cooperative Oncology Group and the Gynecologic Oncology Group.

The section offers to third and fourth year medical students an eight-week elective course in the fundamentals of tumor biology and behavior. A four to eight week rotation stressing clinical aspects of cancer is offered for interns and residents.

One- or two-year clinical fellowships are available and provide in-depth training in medical oncology, with rotation through Hematology, Pathology, and Therapeutic Radiology if desired. The program is designed to prepare the fellow for Board Certification in Medical Oncology. Application should be made to the Director of the Section.

## *Section of Pulmonary Medicine*

**CARTON, ROBERT W., M.D., Director**  
**BONBREST, HELEN C., M.D.**  
**CARASSO, BEN, M.D.**  
**WERNER, PETER, M.D.**

The Pulmonary Medicine Unit consists of the Pulmonary Function Laboratory, the

Respiratory Therapy Department, and the Chest Physical Therapy Department. Clinically, it is concerned with both acute and chronic diseases related to the lungs and is closely integrated with the thoracic sections

## *Pulmonary Medicine . . .*

of surgery, radiology, and pathology. Senior clerkships, elective intern rotations, resident rotations and fellowships are available. House officers and students receive exposure to pulmonary physiology, interpretation of pulmonary function tests, ventilator and blood gas management, bronchial hygiene, a wide variety of chest diseases,

bronchoscopy and, where appropriate, rehabilitative techniques in chronic lung disease. There are regularly scheduled multidisciplinary conferences held both within the Medical Center and with other universities in Chicago, and teaching opportunities are available at student, therapist, house officer, and fellow levels.

## *Section of Rheumatology*

**JONES, JOHN VERRIER, B.A., B.M.,  
B.Ch., F.R.C.P., Director**

Recently, the Willard Wood Chair of Rheumatology has been established. Dr. John Verrier Jones, who has been appointed occupant of this Chair, arrived at this institution during the summer of 1976.

A teaching program in rheumatology at a student and post-graduate level is being developed in collaboration with a

group of clinical rheumatologists. The student is encouraged to participate in the consultative and clinical services of the Division of Rheumatology in which research interests include the diagnosis and management of the vasculitic diseases and of systemic lupus erythematosus. The interests of this department are closely linked with those of the Department of Immunology.

## **Department of Neurological Sciences**

**COHEN, MAYNARD M., M.D., Ph.D.,  
The Jean Schweippe Armour  
Chairman of Neurology**  
**BAILEY, ORVILLE, B.A., M.D.,**  
Visiting Professor, RMC and  
Consultant, PSLH  
**BERGEN, DONNA, B.A., M.D., Assistant**  
Professor, RMC and Assistant  
Attending, PSLH  
**BERGER, VICTOR P., B.A., M.D.,**  
Instructor, RMC  
**BRUETMAN, MARTIN E., B.A., M.D.,**  
Professor, RMC  
**COCHRAN, JOHN W., B.S., M.D.,**  
Instructor, RMC and Adjunct  
Attending, PSLH  
**COHEN, MAYNARD M., B.S., M.D.,**  
Ph.D., Professor, RMC and Senior  
Attending, PSLH  
**DAVIS, FLOYD A., B.S., M.D., Profes-**  
sor, RMC and Senior Attending, PSLH  
**DeTOLEDO, LEYLA, B.A., M.A., Ph.D.,**  
Visiting Associate Professor, RMC  
**FISHER, MORRIS A., B.A., M.D.,**  
Associate Professor, RMC and  
Associate Attending, PSLH  
**FOX, JACOB H., M.D., Associate**  
Professor, RMC and Associate  
Attending, PSLH (also Internal  
Medicine)  
**FROST, THOMAS M., B.S., M.D.,**  
Instructor, RMC and Adjunct  
Attending, PSLH  
**GARVIN, JOHN S., B.A., M.D., Visiting**  
Professor, RMC and Senior Attending,  
PSLH (also Psychiatry)

**GOETZ, CHRISTOPHER, M.D.,**  
Instructor, RMC and Adjunct  
Attending, PSLH  
**GROSSMAN, HERBERT J., B.S., M.D.,**  
Professor, RMC and Senior Attending,  
PSLH (also Pediatrics)  
**HARRISON, WILLIAM H., B.S., M.S.,**  
Ph.D., Professor, RMC (also  
Biochemistry)  
**HARTMANN, J. FRANCIS, A.B., Ph.D.,**  
Professor, RMC and Senior Scientist,  
PSLH  
**HERBA, EDWARD J., M.D., Assistant**  
Professor, RMC and Assistant  
Attending, PSLH  
**HOEPPNER, THOMAS J., B.S.C., M.A.,**  
Ph.D., Assistant Professor, RMC  
**HOSKIN, FRANCIS C. G., B.A., M.A.,**  
Ph.D., Visiting Professor, RMC  
**HUCKMAN, MICHAEL S., B.A., M.D.,**  
Associate Professor, RMC and  
Associate Attending, PSLH (also  
Diagnostic Radiology)  
**KESSLER, ELIZABETH, B.A., M.D.,**  
Instructor, RMC and Adjunct  
Attending, PSLH  
**KLAWANS, HAROLD L., M.D.,**  
Professor, RMC and Senior  
Attending, PSLH  
**KRAMER, JEFFREY, M.D., Instructor,**  
RMC and Adjunct Attending, PSLH  
**MEDINA, JOSE L., B.S., M.D.,**  
Instructor, RMC

## **Neurological Sciences . . .**

MELYNN, MICHELLE, B.A., M.D., Assistant Professor, RMC and Assistant Attending, PSLH (also Pediatrics)	SCHAUF, CHARLES L., S.B., Ph.D., Associate Professor, RMC (also Physiology)
MICHAEL, JOEL A., B.S., M.S.C., Ph.D., Associate Professor, RMC (also Biomedical Engineering)	SELLA, MICHAEL Z., B.S., M.D., Assistant Professor, RMC
MORRELL, FRANK, B.A., M.S., M.D., Professor, RMC and Senior Attending, PSLH	SHENKER, DAVID M., A.B., M.D., Assistant Professor, RMC and Assistant Attending, PSLH
NAUSIEDA, PAUL A., B.S., M.D., Assistant Professor, RMC and Assistant Attending, PSLH	SHIVDE, ANURADHA J., M.B.B.S., M.D., Assistant Professor, RMC and Assistant Attending, PSLH
NEER, DAVID D., B.S., M.D., Instructor, RMC and Assistant Attending, PSLH	STEFOSKI, DUSAN, M.D., Assistant Professor, RMC and Assistant Attending, PSLH
PAGE-EL, EDWARD, B.S., M.D., Assistant Professor, RMC and Assistant Attending, PSLH (also Pediatrics)	TANNER, CAROLYN, M.D., Instructor, RMC and Adjunct Attending, PSLH
PAVLOU, MARCIA, B.A., M.A., Ph.D., Assistant Professor, RMC and Assistant Scientist, PSLH (also Psychology)	TOPEL, JORDAN L., M.D., Assistant Professor, RMC and Assistant Attending, PSLH
PROSKE, ANTHONY, B.S., M.D., Instructor, RMC and Adjunct Attending, PSLH	WEINER, WILLIAM J., B.S., M.D., Associate Professor, RMC and Associate Attending, PSLH
REYES, MARCELINO G., B.S., M.D., Assistant Professor, RMC	WHISLER, WALTER, A.B., M.D., Ph.D., Professor, RMC and Senior Attending and Senior Scientist, PSLH (also Neurosurgery)

The Department of Neurological Sciences is responsible for in-patient and out-patient neurological services, and offers both consultation and direct patient care. Training in neurology and related neurosciences is provided at the pre- and post-doctoral levels for undergraduates and house staff members.

The Neurology Residency Training Program is fully accredited. Two residents are appointed to the Department of Neurological Sciences each year. All residents have an opportunity to learn the fundamentals of clinical neurology in out-patient clinics and in-patient and consultation services. They have an opportunity to learn various special neurologic procedures, including spinal and cisternal puncture, neuro-ophthalmologic and neuro-otologic studies, electroencephalography, electromyography and pneumoenceph-

alography, arteriography, and myelography.

The first year of the residency program is devoted to clinical services plus a rotation in electroencephalography. The second year consists of a six-month full-time rotation in neuropathology and six months on the clinical inpatient services. The final year includes separate rotations in neuropaediatrics and neuroradiology and a six-month elective period that can be devoted to laboratory or clinical research or to more specialized clinical training such as neuro-ophthalmology.

Teaching exercises include weekly neurologic grand rounds and neuropathology conferences. Conferences and seminars are held in neuroradiology, neurochemistry, neurophysiology, neuroanatomy, and interpretation of computerized tomographic scans.

FORDHAM, ERNEST W., M.D., Chairman	RAYUDU, GARIMELLA V., B.S., M.S., Ph.D., Associate Professor, RMC and Associate Scientist, PSLH
ALI, AMJAD, M.B.B.S., Assistant Professor, RMC and Assistant Attending, PSLH	TURNER, DAVID A., B.A., M.D., Associate Professor, RMC and Associate Attending, PSLH (also Diagnostic Radiology)
FORDHAM, ERNEST W., B.S., M.D., Professor, RMC and Senior Attending, PSLH (also Diagnostic Radiology)	

## **Department of Nuclear Medicine**



## Nuclear Medicine . . .

Nuclear Medicine occupies a new 8,500 square foot facility with a large modern radiopharmacy and a gas laboratory. Equipment includes high-speed dual probe scanners, tomographic scanning, scintillation cameras with rapid sequence capabilities for dynamic studies, automatic liquid scintillation and gamma counters, and other tracer and monitoring equipment. The department operates under the supervision of the isotope committee that governs the broad medical license issued to the institution by the Atomic Energy Commission.

Well over 8,000 scanning procedures are performed yearly with routine scanning of most organs with short-half-lived isotopes. A modest number of tracer studies are also performed.

The department now conducts a residency training program in nuclear medicine in addition to providing the nuclear medicine portion of training for both the diagnostic radiology and therapeutic radiology residency programs. The department or the institution as a whole, offers yearly courses in physics and basic radioactive isotope techniques, refresher courses for board certification, and radiopharmaceutical workshops for technicians, physicians, and radiopharmacists. Elective clerkship rotations are offered for medical students. The department participates in various grand rounds, conferences, and daily discussions with house staff and medical students, correlating clinical problems with results of scanning procedures.

## Department of Pediatrics

**CHRISTIAN, JOSEPH R., M.D., The Woman's Board Chairman of Pediatrics**  
**AGARWALA, BROIENDRAN, M.D., Assistant Professor, RMC**  
**ALLEN, RICHARD R., B.S., M.D., Assistant Professor, RMC**  
**ANTHONY, PAUL K., B.S.M., M.D., Associate Professor, RMC**  
**ARNECILLA, PABLO B., A.A., M.D., Assistant Professor, RMC and Assistant Attending, PSLH**  
**BALAGTAS, ROLANDO C., M.D., Assistant Professor, RMC and Assistant Attending, PSLH**  
**BALASUBRAMANIAN, PADMA, M.D., Instructor, RMC and Adjunct Attending, PSLH**  
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**BEVERLY, BERT I., B.S., M.D., Assistant Professor, RMC**  
**BHARANI, SAKINA, B.S., M.D., Assistant Professor, RMC and Assistant Attending, PSLH**  
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**BROCKEN, CECILIA, B.S., M.A., Ph.D., Associate Professor, RMC and Associate Scientist, PSLH (also Psychology and Social Sciences)**

**BUCHELERES, H. GUNTHER, M.D., Professor, RMC and Senior Attending, PSLH**  
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**CANTEZ, TALAT, M.D., Associate Professor, RMC and Assistant Attending, PSLH**  
**CANTORNA, BERNARD, M.D., Assistant Professor, RMC**  
**CHANG, TIMOTHY C., M.D., Instructor, RMC and Adjunct Attending, PSLH**  
**CHAUDHARY, MOHAMMADY, M.D., Instructor, RMC and Adjunct Attending, PSLH**  
**CHEN, JACKSON W., M.D., Instructor, RMC and Adjunct Attending, PSLH**  
**CHRISTIAN, JOSEPH R., M.D., Professor, RMC and Senior Attending, PSLH**  
**CZERNIEJEWSKI, RICHARD, M.D., Instructor, RMC and Adjunct Attending, PSLH**  
**DAMMERS, WARREN R., M.D., Lecturer, RMC and Consultant, PSLH**  
**DAMPTZ, ROBERT E., M.D., Assistant Professor, RMC and Assistant Attending, PSLH (also Psychiatry)**  
**DIAMOND, EUGENE R., M.D., Visiting Professor, RMC**  
**DOCHIOS, MARY, B.S., M.D., Assistant Professor, RMC**  
**DRISCOLL, THOMAS P., M.D., Assistant Professor, RMC**

## Pediatrics . . .

- DRISCOLL, PAUL, F., M.Ed., Instructor, RMC and Assistant Scientist, PSLH
- ELAM, HARRY P., M.D., Professor, RMC and Senior Attending, PSLH (also Preventive Medicine)
- ERIKSEN, RONALD G., B.S., M.D., Instructor, RMC
- FUNK, JEANNE, A.B., Ph.D., Assistant Professor, RMC and Assistant Scientist, PSLH (also Psychology and Social Sciences)
- GARDNER, H. REX, M.D., Assistant Professor, RMC and Assistant Attending, PSLH (also Radiology)
- GEWURZ, ANITA T., B.S., M.D., Instructor, RMC and Adjunct Attending, PSLH (also Immunology)
- GROSSMAN, AARON, B.A., M.D., Professor, RMC and Senior Attending, PSLH
- GROSSMAN, HERBERT J., B.S., M.D., Professor, RMC and Senior Attending, PSLH (also Neurological Sciences)
- HALSTEAD, R. DAVID, B.S., M.D., Assistant Professor, RMC and Assistant Attending, PSLH
- HENIKOFF, LEO M., M.D., Associate Professor, RMC and Associate Attending, PSLH
- HENN, S. C., B.A., M.S., M.D., Emeritus, RMC and Emeritus, PSLH
- HYDE, JOHN S., B.S., M.D., Professor, RMC and Senior Attending, PSLH
- ISRAEL, JEANNETTE, M.D., Instructor, RMC and Adjunct Attending, PSLH
- JOHNSON, FRANK R., S.B., M.D., Associate Professor, RMC and Senior Attending, PSLH (also General Surgery)
- JONES, JR., CLAY H., B.A., M.D., Associate Professor, RMC and Senior Attending, PSLH (also Preventive Medicine)
- JUNG, EDWARD, B.S., M.D., Assistant Professor, RMC and Assistant Attending, PSLH
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- KATELE, ELVYRA, M.D., Member, RMC
- KEITH, L. EUGENE, B.S., M.D., Associate Professor, RMC and Senior Attending, PSLH
- KHURANA, C. MOHINI, B.S., M.B.B.S., Associate, RMC
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- MUKUNDAN, PADMANABHAN, M.D., Associate, RMC
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## Pediatrics . . .

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ROA, SRIPATHY, M.D., Associate, RMC and Assistant Attending, PSLH	STROKOSCH, GARY R., B.A., M.D., Assistant Professor, RMC and Assistant Attending, PSLH
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SACKS, MARTIN O., M.D., Assistant Professor, RMC	VERCOE, JAMES L., B.S., M.D., Assistant Professor, RMC
SANTUCCI, BARBARA, B.A., M.D., Assistant Professor, RMC and Associate Attending, PSLH (also Internal Medicine)	WALLIN, PAUL E., B.S., M.D., Instructor, RMC
SCHWARTZ, DONALD P., B.A., M.D., Assistant Professor, RMC and Adjunct Attending, PSLH	WILLIAMS, RICHARD F., B.S., M.D., Assistant Professor, RMC
	WIRTSCHAFTER, ROBERT, M.D., Assistant Professor, RMC
	WAI, WILLIAM Y.S., M.D., Instructor, RMC and Adjunct Attending, PSLH
	WONG, PAUL W., M.D., Professor, RMC and Senior Attending, PSLH (also Internal Medicine)
	ZERVOPOULOS, EVANGELIA, M.D., Instructor, RMC

The Department of Pediatrics' in-patient unit includes beds for newborns, infants, children, and adolescents. The patient areas are divided into a Section of Neonatology, which has nurseries for well babies, and a Perinatal Center that includes neonatal intensive care and neonatal intermediate care units; pediatric surgical (15 beds), intensive care (6 beds), and intermediate care (6 beds) units; a general pediatric unit of 31 beds for infants and children 12 years of age and under; and 22 beds for adolescents and

young adults 13 to 21 years of age. In-patient admissions are approximately 6,000 per year, with equal distribution of medical and surgical patients. Approximately one-half of the patient admissions are private.

The staff includes 45 full time, 5 part time, and 56 volunteer members. The teaching program correlates medical student and house staff training. This type of training program results in an ever increasing opportunity for the house staff to participate in academic teaching and research. Daily experience

## Pediatrics . . .

is directed primarily toward the understanding of basic principles and practices of pediatrics.

Training for the PL I (first-year trainee) consists of in-patient and ambulatory assignments, with rotation through general pediatric medical, pediatric surgical, adolescent and young adult services, developmental pediatrics, and genetics.

Ambulatory experience includes appropriate services integrated with the in-patient program. Specialty experience is available in general pediatrics, in pediatric medical and surgical specialties, and on an in-patient and out-patient basis in growth and development, preventive pediatrics, allergy/clinical immunology, cardiology, endocrinology and metabolism genetics, hematology/oncology, psychiatry, psychology, neurology, radiology, poison control, accident prevention, and birth defects.

The Emergency Room-Triage-Acute Care Services are staffed by residents with continuous consultation service by the full-time and volunteer staff.

The neonatal nurseries are under the direction of the Department of Pediatrics. Approximately 300 infants are delivered each month. Under close supervision, the trainee becomes acquainted with the newborn infant during and after discharge from the hospital.

The trainee receives in-patient responsibility and teaching experience under the direct supervision of a senior resident and volunteer or full-time staff members. Attending pediatricians act as supervisors and consultants to the pediatric residents.

The PL 2 (second-year trainee) rotates through general pediatric medical, pediatric surgical, adolescent, neonatal, and hematology/oncology

services with supervisory responsibility for PL 1 trainees and junior and senior medical students. The PL 3 (third-year trainee) rotates through allergy/clinical immunology, cardiology, the neonatal intensive care center, the pediatric intensive and intermediate care centers, and an elective service.

Cardio-respiratory diseases, including rheumatic fever, congenital heart defects, and collagen diseases are presented in the ambulatory and in-patient services, using the facilities of the cardiorespiratory laboratory and chest disease service. The resident receives experience under direct supervision of a qualified pediatrician, an internist, and a surgeon, with full-time and volunteer staff members as consultants. Student teaching and ambulatory service responsibility are increased during advanced training. Students on the ambulatory and in-patient services are assigned to the residents for teaching purposes during specific periods of the week.

A graduate program in pediatric research and teaching is offered as an elective only to selected residents who have completed a two- or three-year program. Not all residents are expected to complete three or more years of training. The graduate program consists of assignments in specialty services such as allergy/clinical immunology, cardiology, hematology, oncology, psychiatry, infectious disease, genetics, neonatology, adolescence, child development, and ambulatory pediatrics.

The graduate program also includes a pediatric assignment of the family practice residents from Swedish Covenant Hospital and West Suburban Hospital. These assignments are for a two month period during which time the trainees rotate through a general pediatric service to



## Pediatrics . . .

acquire basic skills and knowledge in general pediatrics and some of its sub-specialties. Opportunity is afforded for participation in patient care and learning of diagnostic and therapeutic procedures in the in-patient and ambulatory setting.

An elective sub-specialty assignment in neonatology, pediatric radiology, allergy/clinical immunology, hematology-oncology, genetics, adolescent medicine, pediatric cardiology, and ambulatory pediatrics, has been offered to residents from Christ Hospital and Mount Sinai Hospital during the past year and will be continued in the future.

The Board and the Residency Review Committee for Pediatrics now recognize five levels of pediatric training (PL-0 through PL-4). Levels PL-1 and PL-2 constitute the essential two core years of training. They must be supplemented either by a PL-0 program taken before, or a PL-3 or PL-4 program taken after the core training. The Pediatric Levels (PL) are defined as follows:

**PL-0** Approved internships or residencies in fields other than pediatrics, e.g., rotating, family practice, internal medicine, general surgery, psychiatry, etc. Credit at this level may also be given for pediatric experience in countries other than the United States or Canada. (Not accepted for graduates in 1976 or later.)

**PL-1** The first postgraduate year in general pediatric training in an approved program. It may

occur immediately after graduation from medical school or follow training at the PL-0 level.

**PL-2** Similar to and following PL-1 but with increased responsibility for patient care and for the supervision of junior staff and medical students.

**PL-3** A single year of advanced training and clinical responsibility in general in-patient or out-patient residency, a chief residency or experience in one or more specialty areas closely integrated with a program approved for the two core years (PL-1 and PL-2).

**PL-4** A program (frequently a fellowship in a subspecialty) in which the proportion of time in nonclinical or laboratory activities is so large that two years must be spent to gain the equivalent of a year of clinical training. The applicant will receive credit for both the third year of clinical training and for a year of practice. Included automatically within this category are 1) all approved programs in pediatric allergy, pediatric cardiology, pediatric hematology-oncology, neonatal-perinatal medicine, and pediatric nephrology; 2) programs in pediatric neurology that are accepted by the American Board of Psychiatry and Neurology for certification with special competence in Child Neurology; and 3) an agreement with the American Board of Internal Medicine for certification by both boards. PL-4 credit for two years of approved training in internal medicine will be permitted.

## Section of Adolescent and Young Adult Medicine

**STROKOSCH, GARY R., M.D., Director**

Adolescent and Young Adult Medicine is rapidly becoming an important part of the practice of medicine. The section's in-patient unit of 22 beds and its out-patient unit are both geographically separated from the pediatric areas. Patients 13 to 21

are cared for in these areas. The house staff consists of PL 1 and PL 2 trainees who are assigned as part of their pediatric rotation. Medical, surgical, and various subspecialty patients are admitted to the unit and are the immediate responsibility of the assigned house staff. While surgical patients

## *Adolescent and Young Adult Medicine . . .*

are cared for by the various surgical services, the assigned medical house staff are expected to be familiar with the problems and complications of the surgical patients and deal with them when necessary.

The aim of this section is to study and treat illnesses occurring in this age group, recognizing that this is a time of great physiological and psychological stress. Special effort is made to keep hospitalization from becoming in any way a traumatic experience. Consultations in surgery, psychiatry, internal medicine, and psychology are readily available.

The ambulatory service provides the home medical

base and, although consultations are readily available, every effort is made to keep the patient in the primary practice rather than to have care administered only by a specialty clinic. The clinic is physically adjacent to the adolescent prenatal and family planning clinic, where a close working relationship is maintained with the Department of Obstetrics and Gynecology. Drug abuse problems are dealt with by staff members of the section.

Seminars are held periodically to discuss various adolescent problems of both organic and non-organic etiology.

## *Section of Allergy and Clinical Immunology*

### **HYDE, JOHN S., M.D., Director**

Allergy/Clinical Immunology training includes both in-patient and out-patient experience. The first-year resident spends approximately 70 percent of his or her time with patients in the pediatric and adult clinics. Teaching consists of informal ward rounds, journal clubs, allergy and immunology lectures, seminars, and patient presentation conferences. By prior individual arrangement, the resident can spend two or three months, on a part-time basis, in at least two of the following out-patient clinics or laboratories: dermatology, otolaryngology, psychiatry, pulmonary medicine, microbiology, or research immunology.

Research and clinical immunology studies include one quarter of formal lectures and laboratory work in the graduate departments of microbiology and/or immunology. Applications of the tools of clinical immunology include newer immunologic techniques B and T cell as well as complement function.

The resident is expected to

see as many hospitalized patients as possible with hypersensitivity diseases and to attend the outpatient services and the Emergency Room. In all these, consultations are made by the allergy/clinical immunology trainee in the presence of a certified allergist. Responsibility for the care of allergy/immunology patients is usually assumed by the resident after six months of supervised experience. Upon assuming consultation responsibility, residents and their work are subject to review by a member of the allergy/clinical immunology staff. The outpatient facility consists of three children's and two adult clinics at the Presbyterian-St. Luke's Hospital and one children's and one adult clinic at University of Illinois Hospital.

During their residencies in the section, physicians are involved in various research projects. Usually, the first-year resident works on an investigative problem already in progress. The second-year resident is expected to devote at least half of his or her time to a specific research study, sometimes purely laboratory and some-



## *Allergy and Clinical Immunology . . .*

times partly clinical. Programs for M.S. and Ph.D. degrees can be arranged. This special arrangement was not established to discourage candidates who wish to become practicing consultants in the subspecialty, but to broaden the spectrum of the program. An ancillary program in pediatric and adult

allergy is available through the cooperation of the allergy unit of the Abraham Lincoln School of Medicine. This program consists of three hours per week for one year at the out-patient clinic of the University of Illinois Hospital, plus one hour per week at the West Side Veterans Administration Hospital.

## *Section of Ambulatory Pediatrics*

### **ELAM, HARRY P., M.D., Director**

The diversified program in ambulatory and community pediatrics is designed to prepare the fellow for a career either in pediatric practice or in academic ambulatory pediatrics. Clinics in the hospital out-patient department offer supervised experience in screening and crisis care, comprehensive care, continuity care, preventive pediatrics, adolescent medicine, and subspecialties. Beds are available for admission of patients on a non-quota basis. Although fellows do not have in-patient obligations, they have the opportunity to follow their own patients during hospitalization. The availability of beds for admission and the availability of visiting nurses for follow-up help assure continuity of care.

The program affords an opportunity to work with Medical Center multi-disciplinary groups

dealing with children who have learning disorders, developmental problems, and multiple handicaps. Experience is gained in the effective use of resources such as nutritionists, psychologists, public health nurses, social workers, and community agencies.

Fellows participate in pediatric grand rounds and multidisciplinary conferences. Arrangements are made with staff pediatricians for the fellow to gain experience in office pediatrics. The flexibility of the program allows the interested fellow to emphasize certain aspects of ambulatory care. Fellows also assume teaching responsibilities.

A one or two year program is available to applicants who have completed two years of approved pediatric internship-residency training.

## *Birth Defects Special Treatment Center*

### **PROTEAU, ROSEANNE, M.D., Pediatrician Coordinator BAAR, KATHERINE, R.N., Nurse Coordinator**

The program in the Birth Defects Special Treatment Center offers complete, comprehensive, and coordinated multidisciplinary care for children with birth defects. Attention is given not only to the medical problems but also to the complex economic, psychological, and social problems that confront the patient and family. The philosophy of the center is based on the realization that the child

with any congenital defect should be given complete care that preserves awareness that he or she is a totally developing individual.

The center is directed by a full-time pediatrician and nurse-coordinator. The team includes physicians skilled in various medical and surgical specialties, as well as personnel qualified to provide physical and occupational therapy, educational and vocational planning, and all aspects of habilitation and rehabilitation. Facilities, services, and devices are

*Birth Defects Special Treatment Center . . .*

available for both the in-patient and the out-patient. Continual evaluation and provisions for long-term follow-up are provided so there is a continuity of patient care in all aspects.

The pediatrician coordinates

the planning and implementation of diagnostic testing and evaluation of each patient, and directs and coordinates the functions of the center's staff in the management of each patient.

*Section of Pediatric Cardiology*

**BUCHELERES, H. GUNTHER, M.D., Director**

The staff of this section consists of two full-time and four part-time pediatric cardiologists. The program is approved for two years of training for board qualification in this specialty. The Sub-Board of Pediatric Cardiology currently requires two years training in general pediatrics prior to entering the subspecialty training in cardiology.

Residents in general pediatric training are assigned for a three-month rotation. The section provides an elective clerkship for medical students.

Approximately 1,200 out-patient examinations are conducted in several practices and 300 to 350 patients are admitted to the in-patient service per year. Approximately 120 children undergo cardiovascular surgical procedures during the course of the year. Surgery is preceded by a conference with the surgical staff. The members of the Section of Pediatric Cardiology participate in intra- and post-operative patient care. The children return directly from the operating room to the Pediatric Intensive Care Unit.

Training is given in all aspects of clinical and laboratory diagnosis of heart disease in children. The staffs of the

section and of the Regional Perinatal Center at our institution work together in the care of premature infants. Clinical conferences, ward rounds, and responsibility as a consultant to the pediatric house staff develop the trainees' experience in bedside diagnosis and therapy. Laboratory techniques are acquired in the Cardio-Respiratory Laboratory, which is equipped with excellent facilities for diagnostic and investigative endeavor. Members of the laboratory staff share the teaching of cardiopulmonary physiology. Between 170 and 180 cardiac catheterization studies are performed annually in infants and children.

Detailed analysis of the pathologic anatomy of cardiovascular disease is pursued in collaboration with the Congenital Heart Disease Research and Training Center located near the Medical Center. Our trainees in Pediatric Cardiology enhance their knowledge of embryology and cardiopulmonary pathology during assignments of one month per year to the center, and its director conducts regular pathology conferences at Presbyterian-St. Luke's Hospital. Over 90 percent of the 30 to 35 children with heart disease who die annually undergo post-mortem examination.

*Section of Community Pediatrics  
Mile Square Health Center*

**PUC, FRANK, M.D, M.P.H., Director**

The development of the neighborhood health center represents a relatively new approach to comprehensive family-oriented medical care for poverty areas. The Mile Square

Health Center serves a community of 23,000, half of which are in the pediatric age group. The philosophy of the center stresses continuous, coordinated, comprehensive care.

General pediatric care is rendered in the center. Routine

*Community Pediatrics  
Mile Square Health  
Center . . .*

laboratory and radiological services are available on the premises. Patients requiring in-patient or out-patient consultation or special diagnostic services are referred to Presbyterian-St. Luke's Hospital.

A program for the training of Nurse Associates has been functioning since the inception of the Center in 1967. Nurse Associates function in the

*Developmental  
Pediatrics*

**BROCKEN, CEL, Ph.D., Director**

Developmental Pediatrics is an educational/training program for pediatric residents in developmental, behavioral, and psychological aspects of health care. There are three major educational approaches: (1) a required 10-12 week rotation for one or two residents at a time; (2) a regularly scheduled weekly conference for all pediatric residents; and (3) collaboration between residents

*Section of Genetics  
and Human  
Development*

**WONG, PAUL W., M.D., Director**

This section performs various genetic studies for in-patients and out-patients at Presbyterian-St. Luke's Hospital and at numerous other hospitals in the Chicago area. Students, residents, graduate students, or other professionals who choose to spend time in the section learn about the procedures used, the various tests, and why they are done.

The research programs carried on in the laboratories of this section are varied and are conducted by a number of people with a variety of backgrounds, training, and experience. Those who choose to spend time in the section may be assigned a project connected with the research going on.

Cooperative research is carried on with several other universities and with other departments. Students, resi-

preventive aspect of the pediatric care and in "pediatric screening." Medical students are offered an opportunity to get an overview of community pediatrics at Mile Square.

All pediatricians working 50 percent or more of their time at the center are on the Staff of Presbyterian-St. Luke's Hospital and have a Faculty appointment at Rush Medical College.

and developmental staff in the comprehensive care of pediatric patients. The multidisciplinary staff for this training program includes representatives from general pediatrics, adolescent medicine, communication disorders, pediatric neurology, child psychiatry, pediatric psychology, the birth defects treatment center, the child protection services team, pediatric social work, and pediatric physical therapy.

dents, and others may be assigned to work in different areas, depending on their individual interests and training.

The Genetics Section also welcomes graduate students or professionals on sabbatical leave who wish to spend several months to a year working on a particular project in our laboratories.

Pediatric residents are welcome to the laboratory for practical experience on how to work on a research problem and how to write a scientific paper. The resident is usually assigned a short-term clinical problem. The resident will have an opportunity to examine babies and children with genetic abnormalities and will see first-hand how the clinical and laboratory diagnoses are made on these patients. The resident will accompany the pediatrician-geneticist when he conducts in-patient consultations and will

## *Genetics and Human Development . . .*

attend genetic lectures and study the literature to reinforce clinically gained knowledge about genetic abnormalities.

Fourth-year medical students (one at a time) may spend 6-12 weeks on a senior elective

in Genetics. The student is assigned to a short-term clinical or laboratory problem and is encouraged to use the scientific literature and to produce a scientific paper.

## *Pediatric Infectious Disease Program*

### **REDDI, K. T., M.D., Director**

The Pediatric Infectious Disease Program was established to develop programs in infectious diseases within the pediatric setting.

Cooperation and assistance is provided for continuing surveillance of pediatric infections and appropriate preventive activities.

The investigative activities of the program include: (1) basic research involving the study of possible etiology of collagen diseases; (2) studies on the evaluation of antibiotic resistant organisms; (3) clinical research relating to the study of incidence and types of infectious diseases

within the institution; (4) investigative studies of major city-wide outbreaks, such as measles and diphtheria. These studies are carried out in collaboration with the Section of Infectious Diseases of the Department of Medicine and the City of Chicago Department of Health.

There are regularly scheduled teaching rounds and conferences held both within the Medical Center and at other universities in Chicago.

A resident is regularly assigned to the Pediatric Infectious Program for three months of special training. A one year fellowship is available in pediatric infectious diseases.

## *Section of Newborn Medicine*

### **MEIER, WERNER A., M.D., Director**

The newborn service admits 2,500 babies a year delivered at Rush-Presbyterian-St. Luke's Hospital.

Over 700 infants a year are admitted into the special care nursery, which includes twelve intensive care isolette units and twenty-six intermediate care units. A comprehensive perinatal approach is emphasized, with close cooperation of the obstetric service, including a weekly obstetric-pediatric conference in which pertinent cases (mother and newborn) are discussed by both services. There is a monthly Perinatal Mortality conference. Rush-Presbyterian-St. Luke's Medical Center has been selected by the Board of Health of the State of Illinois as one of the Regional Perinatal Centers for the City of Chicago and nearby counties. This has lead to active working

and teaching activities in the community hospitals and to a very specialized system for transporting sick infants into our Medical Center.

Pediatric 2nd and 3rd year trainees are assigned to the newborn service for ten week rotations. Trainees from other services (obstetrics) are assigned to the newborn service. Third-year medical students spend part of their clerkship in the newborn service. Also, fourth-year medical student may elect newborn service rotation with a patient care responsibility under supervision of the nursery staff.

Three clinical fellows in newborn medicine supervise patient care, assist with teaching and service activities, and participate in research and other special projects. Work rounds and attending rounds are held daily.

The special nursery clinic



*Newborn  
Medicine . . .*

*Pediatric  
Psychology*

provides follow-up continuity of care for those babies with problems related to the perinatal

**BROCKEN, CEL, Ph.D., Director**

The Pediatric Psychology Program, an integral part of the Department of Pediatrics, was established to develop psychological services and programs within the pediatric milieu. It strives to facilitate maximum collaboration between the medical and behavioral sciences in the comprehensive care of the pediatric patient. Psychological services include developmental evaluations, diagnostic testing, and psychotherapy. Every effort is made to involve the pediatrician, the family, and the school at every level of diagnosis and psychotherapy.

In addition to the more traditional goal of diagnostic and therapeutic services, programs are being developed for the normal child and adolescent under the stress of illness and hospitalization. The main

period that continue after they have been discharged from the nursery.

objective of these programs is to maximize the total therapeutic aspects of the hospital milieu. These programs are designed to help the patient cope with the psychological demands of illness and hospitalization.

The educational role of the pediatric psychologist at the Medical Center includes developing curriculum and teaching in a number of core and elective courses in Rush Medical College; participating in the Developmental Pediatrics Program for pediatric house staff, which provides weekly conferences for pediatricians at all training levels and a specialty quarter for advanced trainees; and participating in staff development and continuing education programs for pediatric nurses and pediatric volunteers.

**Department of  
Preventive Medicine**

SCHOENBERGER, JAMES A., B.S., M.D., Chairman  
BONBREST, HELEN C., A.B., M.D., Assistant Professor, RMC and Assistant Attending, PSLH (also Internal Medicine)  
DWARAKANATHAN, ARCOT A., M.B.B.S., Instructor, RMC and Adjunct Attending, PSLH  
ECKENFELS, EDWARD, M.A., Assistant Professor, RMC  
ELAM, HARRY P., B.S., M.D., Associate Professor, RMC and Associate Attending, PSLH (also Pediatrics)  
EXUM, DOLORES B., B.A., M.S.W., Instructor, RMC (also Psychology and Social Sciences)  
HALL, YOLANDA F., M.S., Assistant Professor, RMC and Assistant Scientist, PSLH  
HUDSON, EDSSEL K., B.S., M.D., Associate Professor, RMC and Senior Attending, PSLH (also Internal Medicine)  
JONES, JR., CLAY H., B.A., M.D., Assistant Professor, RMC and Senior Attending, PSLH (also Pediatrics)

KALLICK, CHARLES, B.S., M.D., Assistant Professor, RMC and Associate Attending, PSLH (also Pediatrics)  
KANNAN, CHAKRAVARTHY, M.B.B.S., Instructor, RMC and Assistant Attending, PSLH (also Internal Medicine)  
KASSRIEL, ROBERT S., A.B., M.D., Instructor, RMC and Assistant Attending, PSLH  
KLINGER, ALFRED D., B.S., M.D., Associate, RMC and Associate Attending, PSLH (also Internal Medicine)  
LASHOF, JOYCE C., A.B., M.D., Professor, RMC and Senior Attending, PSLH (also Internal Medicine) (LOA)  
LEPPER, MARK H., B.A., M.D., Professor, RMC and Senior Attending, PSLH (also Internal Medicine)  
LEVIN, STUART, B.M., M.D., Associate Professor, RMC and Senior Attending, PSLH (also Internal Medicine and Microbiology)  
LEVINE, CHARLOTTE C., B.A., M.D., Instructor, RMC and Assistant Attending, PSLH (also Internal Medicine)

## **Preventive Medicine . . .**

LEVINE, MILTON D., B.A., Sc.D., M.D., Professor, RMC and Senior Attending, PSLH (also Internal Medicine)	REYNOLDS, ROBERT E., B.A., M.D., M.P.H., D.P.H., Professor, RMC and Senior Attending, PSLH (also Internal Medicine)
McCREARY, PATRICIA A., A.B., M.D., Associate Professor, RMC and Associate Attending, PSLH (also Internal Medicine)	SCHEINER, DAVID L., B.A., M.D., Associate Professor, RMC and Assistant Attending, PSLH (also Internal Medicine)
MEYER, JOHN H., M.D., Associate, RMC and Assistant Attending, PSLH (also Internal Medicine)	SCHOENBERGER, JAMES A., B.S., M.D., Professor, RMC and Senior Attending, PSLH (also Internal Medicine)
NELSON, KAREN B., A.B., M.D., Assistant Professor, RMC and Assistant Attending, PSLH (also Pediatrics)	SCHOENENBERGER, JOSEPH C., B.S., M.D., Ph.D., Assistant Professor, RMC and Assistant Scientist, PSLH (also Psychology and Social Sciences)
NERI, JR., GILBERTO S., M.D., Assistant Professor, RMC and Assistant Attending, PSLH	SHEKELLE, RICHARD B., Ph.D., Professor, RMC
NOBLE, BARBARA W., B.S., M.D., Assistant Professor, RMC and Assistant Attending, PSLH (also Internal Medicine)	SPIES, HAROLD W., B.S., M.D., Associate Professor, RMC
PASSAVOY, MITCHELL, B.A., M.A., Emeritus, RMC and Emeritus, PSLH	STEINBERG, HAROLD H., M.D., Associate Professor, RMC and Senior Attending, PSLH (also Internal Medicine)
POMERANTZ, RHODA S., A.B., M.D., Assistant Professor, RMC and Assistant Attending, PSLH (also Internal Medicine)	SUNSERI, ALBERT J., Ph.D., Associate, RMC, Complemental Faculty
POST, JOHN, M.D., Visiting Assistant Professor, RMC and Emeritus, PSLH (also Internal Medicine)	TURNER, IRENE R., Assistant Professor, RMC
PROTEAU, ROSEANNE V., A.B., M.D., Assistant Professor, RMC and Assistant Attending, PSLH (also Pediatrics)	

The Department of Preventive Medicine has as its goal the development of active programs of teaching, research, and planning in the areas of health care delivery, preventive practices, ecology and epidemiology, and occupational and environmental health.

The Department of Preventive Medicine, although new in 1971, has grown from what was formerly the Section of Community Medicine of the Department of Medicine. Thus the department already has an active program of research in medical care and the preventive aspects and epidemiology of chronic disease. Under the direction of the Section of Community Medicine, the Mile Square Health Center, a neighborhood health center serving a population of 25,000, was developed. Studies on utilization of health services, hospitalization rates, and cost analysis

were carried out within the center.

The medical director of ANCHOR (a health maintenance organization), as a member of the department, plays a major role in developing new models for health care delivery. The department is actively working with the vice president for health care planning in designing an interrelated network of health maintenance organizations, including the total medical care planning for a new city.

There is ongoing research in the department in preventive practices and chronic disease epidemiology. A clinical unit of the National Cooperative Study of Coronary Disease, a long-term study of the effect of drugs on mortality of post-myocardial infarct patients, was based in the department and has completed its work. In addition, investigation of hypertension in urban, suburban, and rural commu-



## Preventive Medicine . . .

nities, including evaluation of case-finding methods and long-term management of hypertension, has been carried out.

Two new studies were instituted in 1974. One, the Multiple Risk Factor Intervention Trial (MRFIT) of the NHLBI, is a cooperative study being carried out in 20 centers throughout the United States to test the hypothesis that simultaneous intervention against the three major risk factors will prevent clinical coronary heart disease. The Rush MRFIT Center is located off campus in Oak Brook, Illinois. The other study is the Aspirin Myocardial Infarction Study (AMIS) of the NHLBI, a nationwide cooperative study of 30 centers to test the efficacy of aspirin in the prevention of recurrent myocardial infarction.

Two members of this department have been active as consultants to the Milton Olive III Memorial Corporation, a community organization that operated a health research

program in Holmes County, Mississippi, under a grant from the National Center for Health Services Research and Development. The Holmes County Health Project dealt with a broad spectrum of rural health problems as well as a study of migration. The consultants from this department have been most active in the development of a population census and in the coordination of the many facets of the program. In addition, they have taken primary responsibility for instituting a community-wide program for the control of hypertension.

Elective experience is available in the department for any resident interested in furthering his or her training in health care planning, medical care research, and epidemiology. Residents may elect to participate in any of the studies or programs, described above and/or develop individual research programs under supervision.

## Department of Psychiatry

**FAWCETT, JAN A., M.D.**, The Stanley G. Harris, Sr., Chairman of Psychiatry  
**AHLUWALIA, Y. KUMAR, M.D.**, Assistant Professor, RMC and Assistant Attending, PSLH  
**ALEXANDER, HARLAN G., M.D.**, Instructor, RMC and Assistant Attending, PSLH  
**ARMSTRONG, CLARESA, M.D.**, Assistant Professor, RMC and Senior Attending, PSLH  
**ARONS, MARTIN, M.D.**, Instructor, RMC  
**BASCH, MICHAEL F., M.D.**, Visiting Professor, RMC  
**BENEZRA, ELIOT E., M.D.**, Assistant Professor, RMC and Assistant Attending, PSLH  
**BERENDI, SANDOR, M.D.**, Instructor, RMC and Adjunct Attending, PSLH  
**BERGER, JACK C., M.D.**, Assistant Professor, RMC and Assistant Attending, PSLH  
**BUCK, DAVID W., M.D.**, Assistant Professor, RMC and Associate Attending, PSLH  
**CARLOCK, WILLIAM D., M.D.**, Instructor, RMC and Assistant Attending, PSLH  
**CAVANAUGH, JAMES L., M.D.**, Assistant Professor, RMC and Assistant Attending, PSLH

**CAVANAUGH, STEPHANIE, M.D.**, Assistant Professor, RMC and Assistant Attending, PSLH (also Internal Medicine)  
**CHANG, SIDNEY SIN-YIH, M.D.**, Assistant Professor, RMC  
**CHARLES, ANDREW V., M.D.**, Instructor, RMC and Assistant Attending, PSLH  
**CHILDRESS, BARRY, M.D.**, Assistant Professor, RMC and Assistant Attending, PSLH  
**CHOR, PHILIP N., M.D.**, Instructor, RMC and Adjunct Attending, PSLH  
**CHRISTOPOULOS, ANGELOS C., M.D.**, Assistant Professor, RMC and Assistant Attending, PSLH  
**CLARK, DAVID C., A.B.**, Instructor, RMC (also Psychology and Social Sciences)  
**CORBETT, LIONEL, M.D.**, Assistant Professor, RMC and Assistant Attending, PSLH  
**DAMPTZ, ROBERT, M.D.**, Assistant Professor, RMC and Assistant Attending, PSLH (also Pediatrics)  
**DAVID, PAUL P., M.D.**, Assistant Professor, RMC  
**DEDERICK, MARGARIDA M., M.D.**, Assistant Professor, RMC and Assistant Attending, PSLH (also Internal Medicine)

## Psychiatry . . .

DEL CAMPO, JOSE A., M.D., Assistant Professor, RMC and Assistant Attending, PSLH	KRAINES, SAMUEL H., M.D., Assistant Professor, RMC and Assistant Attending, PSLH
DUBNER, HAROLD H., M.D., Assistant Professor, RMC and Assistant Attending, PSLH	KUHL, DOROTHY L., M.D., Instructor, RMC and Assistant Attending, PSLH
DULIN, THEODORE J., M.D., Assistant Professor, RMC, MSHMC	LANE, HAROLD J., M.D., Instructor, RMC and Assistant Attending, PSLH
DROM, ROBERT E., M.D., Assistant Professor, RMC and Associate Attending, PSLH	LANGNER, HERMAN P., M.D., Instructor, RMC and Assistant Attending, PSLH
EBENHOEH, PATRICK E., M.D., Assistant Professor, RMC and Associate Attending, PSLH	LAZARUS, LAWRENCE W., M.D., Assistant Professor, RMC and Assistant Attending, PSLH
EPSTEIN, PHILLIP S., M.D., Assistant Professor, RMC and Assistant Attending, PSLH	LEFF, JOEL, M.D., Instructor, RMC and Adjunct Attending, PSLH
ERICKSEN, STEPHEN, M.D., Assistant Professor, RMC	LEVITT, LEROY P., M.D., Professor, RMC, MSHMC
FAWCETT, JAN A., B.A., M.D., Professor, RMC and Senior Attending, PSLH	LIEBLING, DAVID S., M.D., Assistant Professor, RMC
FEIN, ALFRED, M.D., Instructor, RMC and Assistant Attending, PSLH	LIPOFF, DENNIS A., Ph.D., Assistant Professor, RMC (also Psychology and Social Sciences)
FINKELSTEIN, ADRIAN, M.D., Assistant Professor, RMC and Assistant Attending, PSLH	LORBER, MAURICE, M.D., Instructor, RMC
FIRLING, RANDALL J., M.D., Instructor, RMC and Adjunct Attending, PSLH	MANGOUBI, ELIE, M.D., Instructor, RMC and Assistant Attending, PSLH
GARVER, DAVID, M.D., Assistant Professor, RMC and Assistant Attending, PSLH	MASON, NORMA, M.D., Assistant Professor, RMC and Assistant Attending, PSLH
GARVIN, JOHN S., M.D., Professor, RMC and Senior Attending, PSLH (also Neurological Sciences)	MEEHAN, MARJORIE, M.D., Emeritus, RMC and Emeritus, PSLH
GERTY, FRANCIS J., M.D., Emeritus Professor, RMC and Consultant, PSLH	MEHLINGER, KERMIT, M.D., Associate Professor, RMC, MSHMC
GOLDBERG, ARNOLD, M.D., Visiting Professor, RMC	MILLER, RAYMOND N., M.D., Assistant Professor, RMC and Associate Attending, PSLH
GWYER, FRED V., M.D., Assistant Professor, RMC and Assistant Attending, PSLH	MOHAJER, MORTEZA, M.D., Instructor, RMC and Adjunct Attending, PSLH
GUISE, GRACIA, M.S., Assistant Professor, RMC (also Psychology and Social Sciences)	NAVARRO, MERCEDES, M.D., Associate, RMC and Adjunct Attending, PSLH
HALPER, IRA S., M.D., Assistant Professor, RMC and Associate Attending, PSLH	NORTON, ARTHUR H., M.D., Associate Professor, RMC and Senior Attending, PSLH
HANNI, JOHN W., M.D., Professor, RMC and Senior Attending, PSLH	O'DONNELL, JOHN W., M.D., Instructor, RMC and Assistant Attending, PSLH
HARBOUR, JEANNE D., M.D., Assistant Professor, RMC and Assistant Attending, PSLH	ORLOFF, MOLLIE, M.D., Assistant Professor, RMC and Assistant Attending, PSLH
HENGVELD, CAROL T., M.D., Instructor, RMC	PATTERSON, JOAN, M.D., Assistant Professor, RMC, MSHMC
HOF, HILDEGARD I., Ph.D., Assistant Professor, RMC (also Biochemistry)	PEIPER, WILLIAM J., M.D., Assistant Professor, RMC and Associate Attending, PSLH
HOVDE, CHRISTIAN A. Ph.D., Visiting Assistant Professor, RMC	PERKINS, GEORGE, M.D., Assistant Professor, RMC and Consultant, PSLH
JOHNSON, H. ROY, M.D., Assistant Professor, RMC and Assistant Attending, PSLH	PISANI, VINCENT D., Ph.D., Assistant Professor, RMC (also Psychology and Social Sciences)
JONES, FRANK DE LEON, M.D., Assistant Professor, RMC and Assistant Attending, PSLH	PROSEN, MELVIN, M.D., Associate Professor, RMC and Assistant Attending, PSLH
KATZ, JEROME I., M.D., Assistant Professor, RMC and Assistant Attending, PSLH	PSARRAS, GEORGETTE M., Ph.D., Assistant Professor, RMC (also Psychology and Social Sciences)
KOENIG, RICHARD C., M.D., Assistant Professor, RMC and Associate Attending, PSLH	REINSTEIN, MICHAEL J., M.D., Assistant Professor, RMC
	ROSENTHAL, M. J., M.D., Assistant Professor, RMC and Associate Attending, PSLH

## Psychiatry . . .

SABLE, ARTHUR D., M.D., Assistant Professor, RMC and Associate Attending, PSLH	Assistant Professor, RMC and Associate Attending, PSLH
SANCHEZ, JOSE RAMON, M.D., Assistant Professor, RMC and Assistant Attending, PSLH	TURK, CHARLES E., M.D., Assistant Professor, RMC and Assistant Attending, PSLH
SCHEFTNER, WILLIAM A., M.D., Assistant Professor, RMC and Assistant Attending, PSLH	URSE, VLADIMIR G., M.D., Professor, RMC and Senior Attending, PSLH
SCHWARTZ, MARVIN, M.D., Assistant Professor, RMC and Associate Attending, PSLH	VASQUEZ, JUAN J., M.D., Assistant Professor, RMC and Assistant Attending, PSLH
SMITH, GARTH D., M.D., Assistant Professor, RMC and Associate Attending, PSLH	WALDMAN, MAURICE, M.D., Assistant Professor, RMC and Assistant Attending, PSLH
SOLOMON, ALFRED P., M.D., Professor, RMC and Senior Attending, PSLH	WATSON, LAURA, M.A., Instructor, RMC and Adjunct Scientist, PSLH (also Psychology and Social Sciences)
STEED, DAVID W., M.D., Associate Professor, RMC and Senior Attending, PSLH	WEINBERG, JACK, M.D., Professor, RMC and Senior Attending, PSLH
STEIN, EDWARD, M.D., Assistant Professor, RMC and Assistant Attending, PSLH	WEST, JAMES, M.D., Assistant Professor, RMC and Assistant Attending, PSLH
TENNEBAUM, ARTHUR S., M.D., Assistant Professor, RMC and Assistant Attending, PSLH	WOLF, MARION E., M.D., Assistant Professor, RMC and Associate Attending, PSLH
THAMPY, KISHORE, J., M.D., Assistant Professor, RMC and Assistant Attending, PSLH	WOLFF, JOHN R., M.D., Professor, RMC and Consultant, PSLH (also Obstetrics and Gynecology)
TILKIN, JEFFREY M., M.D., Assistant Professor, RMC and Assistant Attending, PSLH	WRIGHT, DONOVAN G., M.D., Professor, RMC and Senior Attending, PSLH
TRAGER, EUGENE P., M.D., Assistant Professor, RMC	YBALLE, SONIA, M.D., Instructor, RMC, MSHMC
TRAKAS, DEMETRIUS A., M.D.,	ZADYLAK, ROBERT G., M.D., Instructor, RMC and Adjunct Attending, PSLH

A fully accredited four-year program provides the eclectic intensive experience necessary for the practice of modern comprehensive psychiatry. For residents without internships, a six month assignment is arranged in medicine, neurology, or family practice. Training in psychodynamic orientation is integrated with psychopharmacologic, family, and community intervention. Research and teaching opportunities are encouraged when appropriate to the resident's development.

The Marshall Field IV Center is the administrative base of the department; it houses the Adult and Child Outpatient Psychiatric Clinic, the Adult and Children's Day Hospital, the Outpatient Alcoholic Program, seminar rooms, and residents' offices. This physical contiguity, which provides access to multiple resources for clinical care and education, exemplifies the con-

tinuity of the training program.

A modern psychiatric unit of 31 beds and an emergency psychiatric unit of 15 beds are an integral part of Presbyterian-St. Luke's Hospital. An Adult General Psychiatric In-patient Unit of 22 beds and a 14 bed Alcohol Treatment Unit are in operation in the department at the Sheridan Road Pavilion at 6130 North Sheridan Road. Each unit is under the supervision of a clinical director who is responsible for the quality of patient care, education, and research.

The Consultation Service provides a broad range of liaison experience as well as specialized elective rotations.

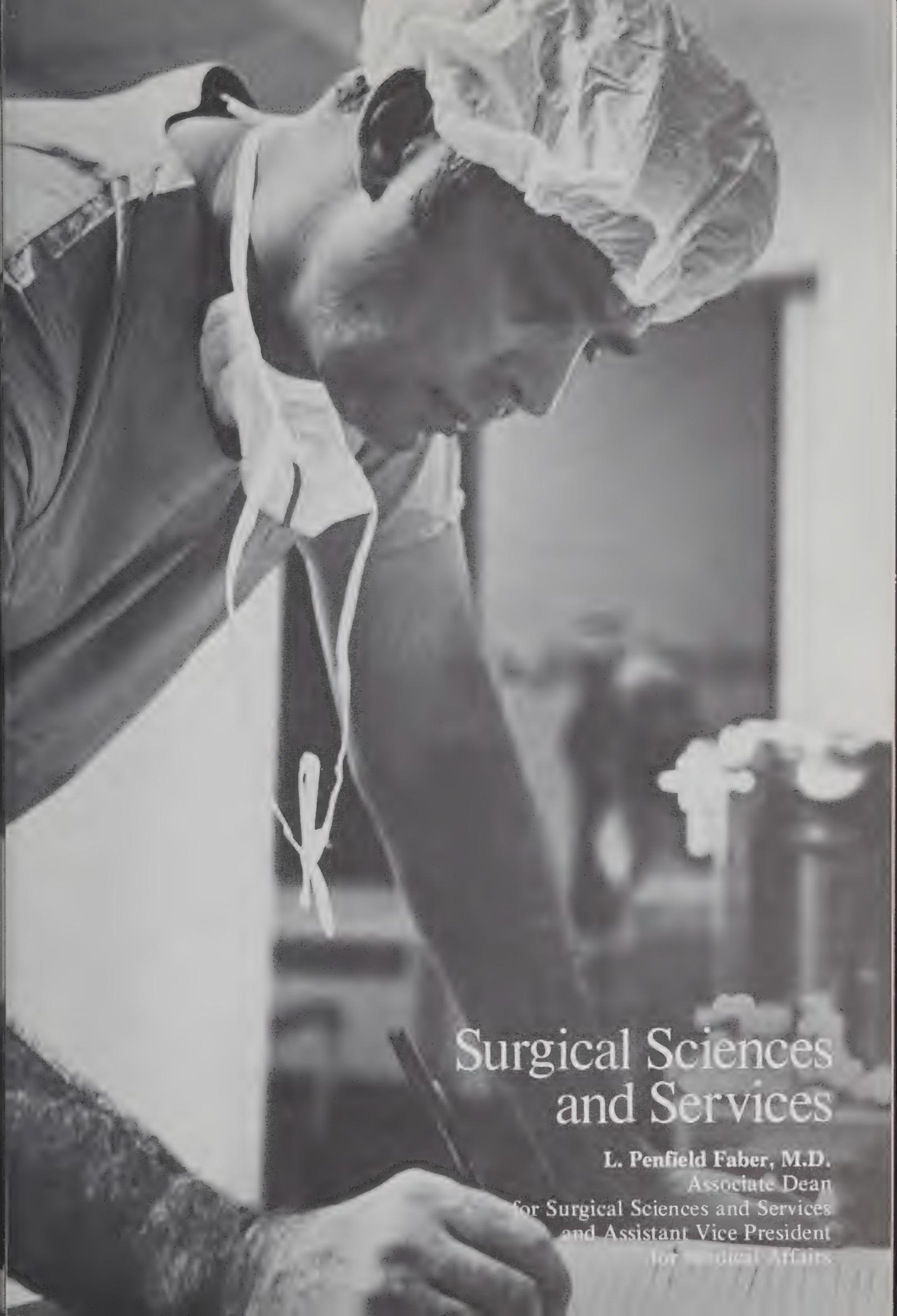
Residents begin training with intensively supervised in-patient study. First year seminars focus on fundamentals of patient interviewing and evaluation, diagnosis of psychopathology and patient management, and psychotherapeutic and somatic

## **Psychiatry . . .**

therapy modalities. Second and third year residents are encouraged to pursue their individual talents while acquiring basic skills in out-patient diagnosis and therapy, family and marital therapy, and child and adolescent psychiatry. In these various subdisciplines, seminar work coordinates with clinical experience and individual supervisory sessions. Fourth

year residents are free to pursue research, community, and elective clinical paths. For residents interested in formal psychoanalytic training, the Chicago Institute for Psychoanalysis is available to candidates when appropriate.

Applications should be made to Melvin Prosen, M.D., Director of Psychiatry Residency Training.



# Surgical Sciences and Services

L. Penfield Faber, M.D.  
Associate Dean  
for Surgical Sciences and Services  
and Assistant Vice President  
for Medical Affairs

## Departments

The Division of Surgical Sciences and Services contains the Departments of General Surgery, Cardiovascular-Thoracic Surgery, Neurosurgery, Ophthalmology, Orthopedics, Otolaryngology and Bronchoesophagology, Plastic Surgery, Urology, Diagnostic Radiology, Therapeutic Radiology, Obstetrics and Gynecology, and Pathology. All appointments to these departments and their subsections as described below are made through the National Intern and Resident Matching Program. All entering postgraduate students spend at least their first year on the General Surgical Service before progressing to their area

### Department of General Surgery

**SOUTHWICK, HARRY W., A.B., M.D., Chairman**  
BANICH, TERENCE G., B.S., M.S., M.D., Instructor, RMC and Adjunct Attending, PSLH  
CALDWELL, RICHARD G., A.B., M.S., M.D., Assistant Professor, RMC and Associate Attending, PSLH  
COLE, WARREN H., M.D., Emeritus, RMC and Emeritus, PSLH  
DAVIS, JR., CARL B., A.B., M.D., Associate Professor, RMC and Associate Attending, PSLH  
dePEYSTER, FREDERIC A., B.A. M.D., Professor, RMC and Senior Attending, PSLH  
DIFFENBAUGH, WILLIS G., B.S., M.D., Emeritus, RMC and Senior Attending, PSLH  
DOOLAS, ALEXANDER, B.S., M.D., Associate Professor, RMC and Senior Attending, PSLH  
ECONOMOU, STEVEN G., B.A., M.D., Professor, RMC and Senior Attending, PSLH  
FELL, EGBERT, M.D., Emeritus, RMC and Emeritus, PSLH  
GILCHRIST, R. KENNEDY, B.S., M.D., Emeritus, RMC and Emeritus, PSLH  
GUYNN, VERNON L., B.S., M.D., Assistant Professor, RMC and Associate Attending, PSLH  
HABEGGER, LOREN J., B.E., M.E., Ph.D., Instructor, RMC

HALEY, RONALD G., B.S., M.S., M.D., Assistant Professor, RMC and Senior Attending, PSLH  
HANSELMAN, RUSSELL C., A.B., M.D., Emeritus, RMC and Emeritus, PSLH  
HOLMBALD, EDWARD C., M.D., Emeritus, RMC and Emeritus, PSLH  
JAMIESON, ROBERT W., P.H.B., M.S., M.D., Associate Professor, RMC and Senior Attending, PSLH  
JOHNSON, FRANK R., S.B., M.D., Associate Professor, RMC and Senior Attending, PSLH (also Pediatrics)  
KAPLAN, GERALD, B.S., M.D., Assistant Professor, RMC and Assistant Attending, PSLH  
LAWTON, STANLEY, M.D., Emeritus, RMC and Emeritus, PSLH  
LEVINGER, LAURENCE W., B.A., M.D., Instructor, RMC and Adjunct Attending, PSLH (LOA)  
McDONALD, GERALD, M.D., Assistant Professor, RMC and Assistant Attending, PSLH  
McDONALD, OWEN G., B.S., M.D., Emeritus, RMC and Emeritus, PSLH  
McMILLIAN, FOSTER L., B.S., M.D., Emeritus, RMC and Emeritus, PSLH  
MERKEL, FREDERICK K., B.S., M.D., Associate Professor, RMC and Associate Attending, PSLH (also Internal Medicine)

**Key:** RMC—*Rush Medical College*; RCHS—*Rush College of Health Sciences*; RCN—*Rush College of Nursing*; PSLH—*Presbyterian-St. Luke's Hospital*; LOA—*Leave of Absence*; CMGH—*Community Memorial General Hospital*; SCH—*Swedish Covenant Hospital*; MSHMC—*Mount Sinai Hospital Medical Center*; CH—*Christ Hospital*, GCH—*Galesburg Cottage Hospital*; CDH—*Central DuPage Hospital*; WSH—*West Suburban Hospital*

## General Surgery . . .

MEYER, HAROLD I., M.D., Emeritus, RMC and Emeritus, PSLH	SALOMON, JACOB, B.S., M.S., M.D., Instructor, RMC and Adjunct Attending, PSLH
OFRENEO, DANILO, M.D., Instructor, RMC and Adjunct Attending, PSLH	SCHMIDTKE, WENDELL H., B.S., M.S., M.D., Assistant Professor, RMC and Assistant Attending, PSLH
OLWIN, JOHN H., A.B., M.D., Emeritus, RMC and Emeritus, PSLH	SHOREY, WILLIAM B., M.D., Associate Professor, RMC and Senior Attending, PSLH
PAUL, HAROLD A., B.S., M.D., Associate Professor, RMC and Senior Attending, PSLH	SOUTHWICK, HARRY W., A.B., M.D., Professor, RMC and Senior Attending, PSLH
POEPPEL, ROGER B., B.D., Ph.D., Instructor, RMC	STRAUS, ALBERT K., A.B., M.S., M.D., Ph.D., Assistant Professor, RMC and Assistant Attending, PSLH
POMERANTZ, MARC A., B.A., M.D., Assistant Professor, RMC and Assistant Attending, PSLH	STRAUS, FRANCIS H., B.S., M.D., Emeritus, RMC and Emeritus, PSLH
RASMUSSEN, ALFRED, M.D., Emeritus, RMC and Emeritus, PSLH	WITKOWSKI, LEON J., B.S., M.S., M.D., Emeritus, RMC and Emeritus, PSLH
REYNOLDS, JOHN T., B.S., M.S., M.D., Professor, RMC and Senior Attending, PSLH	
ROSEMAN, DAVID L., B.S., M.S., M.D., Associate Professor, RMC and Senior Attending, PSLH	

Optimal surgical care is best rendered to patients by a surgical staff that is not only of the highest caliber but also well balanced in all of its various departments. A staff so composed provides a rich opportunity for the trainee, whether resident or fellow, to obtain a well-rounded and appropriately progressive education, both in basic surgery and in the disciplines of specialty surgery. The Department of General Surgery has and accepts the broadest responsibility for training within this environment. The Department of General Surgery at Rush-Presbyterian-St. Luke's Medical Center includes the Section of Transplantation and the Section of Pediatric Surgery. These sections, however, are assigned to one of the General Surgery services.

There are four General Surgery services, each supervised by a chief of service who is a senior member of the attending staff. Service I incorporates the Section of Transplantation; Service II, the Section of Pediatric Surgery. Each of the services have a balance of patient load although there is some disproportion as to the number of attending surgeons, varying with the volume of the

individual's private practice. Informal rounds are held daily with members of the attending staff and formal teaching rounds take place at least once a week, at scheduled times. There are numerous conferences held each week. Basic science information is incorporated in the general clinical programs at these conferences through participation of the various members of the basic science faculty of Rush Medical College. The pathologic, biochemical, and physiologic processes involved in the particular topics of cases for discussion are carefully integrated into the total review of the subject for the day. In addition, there is a surgical Basic Science Conference held each Saturday morning. A carefully planned program, covering basic science as it relates to general surgery, is presented at these conferences, with an overall plan of a two-year rotation to complete the entire cycle. Some subjects, such as acid-base balance and fluid electrolytes, are covered twice in the course of two years, while some subjects, such as immunology and chemotherapy, are covered only once in two years. Once a month, the Surgical Basic

## General Surgery . . .

Science Conference is devoted to surgical pathology; this session is moderated by the Chairman of the Department of General Surgery.

The American Board of Surgery has approved the program for a full five years of postgraduate training. All candidates must complete the five years, including the senior residency position, to be eligible for certification examination by the American Board.

*First Year of Residency:* Appointments to the first year of training in General Surgery are primarily categorical, although an additional categorical appointment is available for an individual who has an appointment elsewhere in a surgical specialty for a Family Practice residency. Trainees from the surgical specialties within the institution, including Orthopedic Surgery, Urology, Neurosurgery, Otolaryngology, Plastic Surgery, and Ophthalmology rotate through the General Surgery services in a manner similar to the General Surgery trainee in this first year of postgraduate training. There are four General Surgery services in the hospital, and six months is spent in two-month rotations on three of the different services. One month is spent in Cardiovascular Surgery, one month in Thoracic Surgery, and one month in the Surgical Intensive Care Unit. Three months remain for elective rotations through the surgical specialties, including Orthopedic Surgery, Urology, Neurosurgery, Otolaryngology, Plastic Surgery, and Anesthesiology.

*Second Year of Residency:* The house officers continue their training as part of the categorical program in the second year, although all appointments are subject to annual review. The second year of residency is, in reality, the completion of the

core training program in basic surgery. No matter what may be the goals of the individual resident with respect to training beyond General Surgery, all are assigned on a similar-type rotation with the expectation of a similar performance. Generally, six months are spent in General Surgery and six months are spent on specialty services, although the specialty rotations are for two months during the second year of residency. One two-month rotation during the second year is spent on rotation to the Orthopedic Service at Christ Hospital, where there is an opportunity for exposure to acute fractures and the management of more common orthopedic problems than are encountered in the Medical Center.

Second-year residents are buttressed on one side by first-year trainees and the medical students assigned to their service (whom they must begin to guide and teach) and on the other side by the senior residents and attending surgeons to whom their progress is a primary responsibility. They perform surgery under the supervision of an attending surgeon or senior resident with staff privileges; equal emphasis is placed on surgical principles and correct operative techniques. The variety and complexity of the operations performed increases commensurate with demonstrated ability. The first two years of the residency program are considered of great significance, because during this time a strong basic foundation is laid that can afford the background for a rewarding continuation of residency training and a lifetime of professional activity.

*Third Year of Residency:* The assignments during the third year of residency are more flexible than those during the first two years. Residents who have an inclination to develop



## General Surgery . . .

and explore a basic research project are strongly encouraged to do so. However, all house officers are expected to begin work on a basic or clinical research project at this time. Residents not assigned to the laboratory will again rotate through various clinical services. It is felt that the entire year need not, necessarily, be spent in the research laboratory; this is particularly true if the background of the project is developed prior to devoting full time during the third year. A variety of elective rotations are available for six months or two three-month rotations, either in other departments within the institution or in acceptable programs elsewhere.

Exposure to basic research experience at this stage fulfills several essential requisites to continued maturation in the science of surgery. The resident already has spent two clinical years and is in a position to have formulated questions that might be answered through laboratory research. Designing and executing an experiment to pursue such problems rewards the resident with the ability to evaluate more intelligently the information in the surgical literature. This only can result in a better clinical surgeon. The research rotation also crystallizes in the mind of the house officer the degree to which he or she may choose to include laboratory or clinical research in an ultimate career. During this third year, certain course work is available for the trainee which, combined with a thesis based on the trainee's project, may complete the qualifications for consideration of a Master's Degree in Surgery.

Each resident is given several options in the selection and execution of surgical experiments. A trainee may choose to participate in an ongoing project and be responsible for one facet

of a broad subject. On the other hand, the resident may work alone on a chosen project or be assigned to a project by the Director of Surgical Research. It is expected, during this year, that the resident will attend the various departmental conferences whenever possible, and it is mandatory that residents attend the weekly surgical seminars held under the sponsorship of the Research Director.

**Fourth Year of Residency:** The fourth year is one of full clinical activity, with the resident assuming an increasing proportion of the responsibility for the management of patients on the service to which he or she is assigned. The resident is, in a way, the executive assistant of the senior resident and is expected to be fully cognizant of the exact status of all patients on the service. Six months of the year are spent on General Surgery services, the remainder in two three-month specialty rotations.

The elective rotations assigned should be in areas not previously covered in any depth, particularly by those who undertook a series of clinical rotations in the third year of training. It should be noted that these rotations may take place in the Medical Center or its affiliated hospitals or, occasionally, in other hospitals approved by the chairman of the department. During this year, some of the trainees rotate through one of the affiliated hospitals as senior general surgical residents in that hospital at that time. This affords the trainee an opportunity to see a larger volume of more common surgical problems than are seen in the largely tertiary care Medical Center.

**Fifth Year of Residency:** Fifth-year residents spend the entire year as the senior trainee on one of the four General Surgery

## **General Surgery . . .**

services or on the Peripheral Vascular Service. In each instance, they are charged with the ultimate responsibility for the deliverance of duties to their

subordinates while remaining fully knowledgeable of all matters pertaining to the care of the surgical patients.

## *Section of Pediatric Surgery*

### **JOHNSON, FRANK R., M.D., Director**

The care of infants, children, and adolescents who have congenital and acquired problems that require surgical care has undergone great change in recent years. The rotation of surgical residents through the Pediatric Surgical Service brings them into contact with these problems, under supervision of an attending pediatric surgeon and in association with attending pediatricians and the pediatric house staff. Rounds are made several times a week in the newborn and neonatal nursery, where among the 3,000 deliveries yearly there are congenital problems amenable to surgical treatment. The development of the Neonatal Center for high risk infants has increased the number of patients with congenital anomalies

requiring surgical management.

Two days a week are set aside for elective surgery, during which time the resident has an opportunity to assist and observe surgical treatment as a member of the operating team. Often he or she is first assistant to the senior resident or attending surgeon, and, depending on interest and ability, may operate with the assistance of the senior resident or attending surgeon. The first-year resident is primarily responsible for the pre- and post-operative care of the patients on his or her service and, under the guidance and supervision of a senior resident, presents patients on daily ward rounds to the attending surgeon for additional consultation.

## *Section of Transplantation*

### **MERKEL, FREDERICK K., M.D., Director**

The Section of Transplantation offers experience in both the clinical and research aspects of organ transplantation. The clinical service is a part of one of the four General Surgery Services. The organ procurement and preservation program is one of the most active in the country. To date, 225 kidneys have been procured for preservation and transplantation by this section. We depend heavily on many of the network hospitals as well as other hospitals and institutions in Northern Illinois and Northern Indiana for referral of brain-dead cadaver donors. In addition to kidney transplantation, other procedures necessary to prepare the patient for transplantation, such as nephrectomy, splenectomy, and

vascular access are performed.

The surgical house staff assists with or carries out these procedures under the supervision of the transplant surgeons. Daily rounds are made on these patients and a daily Renal/Transplant Conference is held in conjunction with the nephrologists.

Active research is being carried out in organ perfusion preservation for those interested in a research experience. The surgical procedures performed on experimental animals are done in the animal resources facility, and the preservation studies are carried out in the Preservation Laboratory.

**Department of  
Cardiovascular-  
Thoracic Surgery**

**NAJAFI, HASSAN, M.D., Chairman**

*Section of Cardiovascular Surgery*

DETAKATS, GEZA, B.A., M.S., M.D., Emeritus, RMC and Consultant, PSLH  
DYE, JR., WILLIAM S., A.B., B.S., M.D., Professor, RMC and Senior Attending, PSLH  
GOLDIN, MARSHALL D., M.S., M.D., Assistant Professor, RMC and Assistant Attending, PSLH  
HUNTER, JAMES A., B.S., M.D., Professor, RMC and Senior Attending, PSLH  
JAVID, HUSHANG, B.S., M.S., M.D., Ph.D., Professor, RMC and Senior Attending, PSLH  
JULIAN, ORMAND C., B.S., M.D., Ph.D., Professor, RMC and Senior Attending, PSLH  
MONSON, DAVID, O., B.S., B.A., M.D., Assistant Professor, RMC and Assistant Attending, PSLH  
NAJAFI, HASSAN, M.S., M.D., Professor, RMC and Senior Attending, PSLH  
SERRY, CYRUS, M.D., Assistant Professor, RMC and Assistant Attending, PSLH  
WEINBERG, JR., MILTON, M.D., Associate Professor, RMC and Senior Attending, PSLH

*Section of Thoracic Surgery*

FABER, L. PENFIELD, B.A., M.D., Professor, RMC and Senior Attending, PSLH  
JENSIK, ROBERT J., B.S., M.S., M.D., Professor, RMC and Senior Attending, PSLH  
KITTLE, C. FREDERICK, B.A., M.S., M.D., Professor, RMC and Senior Attending, PSLH

The department consists of two sections, Cardiovascular Surgery and Thoracic Surgery, which have separate patient care functions but a strong combination of purpose in the training program. General surgical residents are given in-depth opportunities in both areas during rotation through the clinical services.

Senior responsibilities are assumed by the cardiovascular-thoracic residents in the department. Completion of an approved general surgical residency is a prerequisite for consideration. Applications should be made not less than 18 months prior to the desired starting date. Two residents are appointed each year, on either January 1 or, more commonly,

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MILLOY, FRANK J., M.S., M.D., Associate Professor, RMC and Associate Attending, PSLH

*Network Hospital Faculty*

ANDERSON, JAMES H., B.S., M.D., Member, Complemental Faculty, RMC, WSH  
KING, JERRY N., M.S., M.D., Assistant Professor, RMC, CH  
KUKRAL, JOHN C., A.B., M.S., M.D., Ph.D., Lecturer, Complemental Faculty, RMC, CMGH  
OLDFIELD, R. CHARLES, B.S., M.D., Assistant Professor, RMC, CMGH  
SPINAZZOLA, ANGELO J., M.S., M.D., Assistant Professor, RMC, CH  
TSAI, EUGENE, M.S., M.D., Associate Professor, RMC, CH

*Residents*

DeLARIA, GIACOMO A., B.S., M.D., Instructor, RMC and Adjunct Attending, PSLH  
MEITES, HERBERT L., B.S., M.D., Instructor, RMC and Adjunct Attending, PSLH  
MOCCIO, CARMINE G., B.S., M.D., Instructor, RMC and Adjunct Attending, PSLH  
SHEPHERD, RICHARD L., B.A., M.D., Instructor, RMC and Adjunct Attending, PSLH  
SHUMAN, ROBERT L., B.S., M.D., Instructor, RMC and Adjunct Attending, PSLH

July 1. This program makes the applicant eligible for examination by the American Board of Thoracic Surgery.

The duration of training varies from 24 to 36 months, the most common being 30 months. Residents who spend a minimum of two years, receive one year of clinical training in each section; ordinarily the additional 6 to 12 months are spent in the Section of Cardiology, the Surgical Intensive Care Unit, cardiovascular surgical research, or various combinations, i.e., 3 months at Children's Memorial Hospital (Chicago) and the Department of Diagnostic Radiology. Many residents begin the program in the Section of Cardiology, where the fundamentals of cardiac cathe-



terization and angiography are stressed. Increasing responsibility in the performance of the various procedures is assigned as experience progresses. At the completion of this rotation the resident is able to judge which diagnostic procedure is necessary, perform it with assistance, and then interpret the results. During this period, time is made available to learn electrocardiographic diagnosis, the essentials of electrocardioversion, and the operation of standard electronic monitoring equipment. Time also is allotted to the study and review of respiratory physiology through laboratory and clinical pulmonary function studies. Bedside teaching of cardiac diagnosis in adults and children is conducted during daily ward rounds. The candidate is assigned certain patients selected for study by the director of the laboratory and is then responsible for the pre-procedural workup and presentation of such patients, following them throughout their hospital course. This rotation is usually two months in duration.

During an elective period of 6 to 12 months, the candidate is given the opportunity of spending 3 months at Children's Memorial Hospital, an affiliate of Northwestern University, and is given senior responsibility for the care of patients. A majority of these patients have congenital cardiac anomalies requiring surgical treatment. An appreciable amount of independent surgical experience is gained during this rotation. On occasion a resident is assigned to the 19-bed Surgical Intensive Care Unit, which is utilized for patients with major cardiovascular and thoracic surgical problems. The Intensive Care Unit is directed by a member of the Section of Cardiovascular Surgery, who spends several hours per day in the unit providing excellent bedside teaching opportunities. Two interns from Medicine, one from Surgery, and medical students on their electives stimulate the assigned resident to

participate in teaching. This rotation provides the possibility for a resident to engage in clinical review or investigation for future publication. Many residents are assigned for one month in Diagnostic Radiology where the principles of arteriography are taught under the direction of two radiologists whose primary interest are in peripheral angiography.

If the resident extends training to three years, he or she will have 6 additional months during which to engage in on-going investigative work in the cardiovascular surgical research laboratory. After 6 to 12 months of such an elective rotation, the resident spends two successive years in the clinical sections. The first clinical year is spent in the Section of Thoracic Surgery, which is devoted exclusively to pulmonary and esophageal surgery with abundant endoscopic experience.

The final rotation consists of 12 months in the Section of Cardiovascular Surgery. The resident is junior for the first 6 months, during which time the majority of operative experience is in arterial surgery, the surgery of portal hypertension, and closed cardiac operations. The final six months as senior resident provides for training in and the performance of open heart surgery with a continued effort in peripheral vascular surgery.

The two sections operate in four rooms 5 days each week for scheduled cases. Each week 15 open heart procedures are performed. Abdominal aneurysmectomy, aortic bifurcation grafting, carotid endarterectomy, and femoral-popliteal bypass make almost daily appearances on the schedule. Pacemaker implantation, surgery for portal and renal hypertension, ductus and coarctation repair, and closed mitral commissurotomy occur with some regularity. Frequent pulmonary and esophageal procedures include pneumonectomy, segmentectomy, decortication, lobectomy, esophagogastric resection, bronchoplasty or sleeve

## **Cardiovascular- Thoracic Surgery . . .**

resection, and endoscopic procedures of all types. Total cases average approximately 200 per month, with the resident staff performing all types. During the training period each candidate moves through the operating room from first assistant to the assumption of operative responsibility as various techniques are mastered. Daily rounds are conducted by attending physicians and provide excellent training in bedside clinical diagnosis. The senior resident assumes responsibility for the weekly cardiovascular-thoracic conference, the precise tabulation of monthly morbidity and mortality, the daily surgical scheduling and the disposition of service personnel for routine activities. Commensurate with ability, the resident assumes full responsibility for the pre-operative work-up and post-operative care of all patients and for the proper administration of the service.

In addition to daily rounds and operative surgery, there is a weekly formal cardiovascular-thoracic conference where cases of interest are presented by several participating institutions across the city and suburbs. Time is allotted for the teaching of diagnostic thoracic radiology and pathology by informal instruction and regularly

scheduled conferences. A monthly session provides an opportunity for the residents to meet invited visiting professors. Residents are encouraged to submit papers for presentation to national societies, with their expenses incurred by the institution. In addition, each resident during training will be sent to one of the scientific sessions of the Society of Thoracic Surgeons or the American Association for Thoracic Surgery.

Within the department there are several programs readily available to interested residents. These include a cardiac assist program, directed by a member of the Section of Cardiovascular Surgery, which utilizes intra-aortic balloon pump devices; the extracorporeal circulation program; and the cardiovascular surgical research laboratory. If the resident chooses to spend one year in this laboratory prior to clinical education, the opportunity will be given to acquire a Master's Degree in Surgery during this period.

A senior member of the department has been made Director of Medical Education; this assures careful evaluation and promotion of activities directed at the education of the trainees.

## **Department of Neurological Surgery**

**WHISLER, WALTER W., M.D., Ph.D.,**  
Chairman  
**D'ANGELO, CHARLES M., B.A., M.D.,**  
Assistant Professor, RMC and Assistant  
Attending, PSLH  
**OLDBERG, ERIC, B.S., M.D., Ph.D.,**  
Emeritus, RMC and Emeritus, PSLH  
**PENN, RICHARD D., B.A., M.D.,**  
Associate Professor, RMC and Associate  
Attending, PSLH  
**SELBY, ROY, B.S., M.D., Visiting**  
Associate Professor, RMC and  
Consultant, PSLH

The Department of Neurological Surgery offers a six-year post-M.D. training program approved by the American Board of Neurological Surgery. During the first year, time is spent on rotation through general surgery and other surgical

**SUGAR, OSCAR, M.D., Visiting**  
Professor, RMC and Consultant, PSLH  
**TORRES, HERNANDO, M.D., Associate**  
Professor, MSHMC  
**VORIS, HAROLD C., M.D., Ph.D.,**  
Emeritus, RMC and Emeritus, PSLH  
**WHISLER, WALTER W., M.D., Ph.D.,**  
Professor, RMC and Senior Attending,  
PSLH (also Neurological Sciences)

departments to develop a broad knowledge of the surgical arts and sciences. The second year is spent in clinical neurosurgery, with emphasis on diagnosis and diagnostic neuroradiology. In the third year, there is a six-month

## **Neurological Surgery ...**

rotation in neurology and six months in neuropathology. The fourth year is set aside for research or electives, and the last two years are in clinical neurosurgery. Rotations often can be modified to accommodate special interests. The clinical aspects of the program are organized around the principle of progressively graded responsibility with appropriate supervision.

The program is designed to present the basic neurological sciences as well as the practical aspects of neurosurgery. During the year, the resident will attend neurology and neurosurgery grand rounds, brain cutting seminars, neurosurgical topic seminars, and the basic neuroscience course (neuroanatomy, neurophysiology, and neurochemistry).

Primary among the strengths of

the Department of Neurosurgery is the broad variety of clinical problems that are studied and managed and the utilization of all of the modern neurosurgical techniques available. Besides general cranial, spinal, and pediatric neurosurgery, many microsurgical and stereotaxic procedures are performed. An active program is also maintained for the medical treatment of malignant brain tumors. The research facilities in the Department of Neurosurgery include a tissue culture laboratory, several highly specialized neurochemistry laboratories, a general biochemistry laboratory, and a neurophysiology laboratory for stereotaxic and microsurgical work.

## **Department of Ophthalmology**

**HUGHES, WILLIAM F., M.D., Acting Chairman**  
**BLAINE, RICHARD M., M.D., Associate, RMC and Attending, SCH**  
**BROWN, DAVID V. L., B.S., M.D., Assistant Professor, RMC and Associate Attending, PSLH**  
**CANNON, ROBERT LEE, B.S., M.D., Assistant Professor, RMC and Attending, GCH**  
**DETERS, CURTIS F., B.A., M.D., Assistant Professor, RMC and Attending, CMH**  
**DEUTSCH, EMIL, M.D., Emeritus, RMC and Emeritus, PSLH**  
**DEUTSCH, WILLIAM E., B.S., M.D., Associate Professor, RMC and Senior Attending, PSLH**  
**FEINHANDLER, HAROLD S., M.D., Assistant Professor, RMC and Attending, MSHMC**  
**FICK, BRUCE D., B.S., M.D., Associate, RMC and Attending, CMH**  
**GAMBLE, RICHARD C., M.D., Emeritus, RMC and Emeritus, PSLH**  
**HAAS, JOSEPH S., B.A., B.S., M.D., Professor, RMC and Senior Attending, PSLH**  
**HACKETT, JOHN N., M.D., Associate, RMC and Attending, CMH**  
**HAGENS, WALTER E., B.S., M.D., Assistant Professor, RMC and Attending, CMH**  
**HERBST, ROBERT W., B.A., M.D., Instructor, RMC and Adjunct Attending, PSLH**  
**HUGHES, WILLIAM F., A.B., M.D., Professor, RMC and Senior Attending, PSLH**  
**KAPLAN, JOEL A., B.A., M.S., M.D., Assistant Professor, RMC and Associate Attending, PSLH**  
**KIRK, HAROLD Q., B.S., M.D., Associate Professor, RMC and Attending, WSH**  
**LEE, CHANG-BOK, B.S., M.D., Instructor, RMC and Assistant Attending, PSLH**  
**LEWICKY, ANDREW O., B.S., M.D., Instructor, RMC and Adjunct Attending, PSLH**  
**MITTELMAN, DAVID, M.D., Visiting Assistant Professor, RMC and Consulting, PSLH**  
**MONCREIFF, WILLIAM F., B.S., M.S., M.D., Emeritus, RMC and Emeritus, PSLH**  
**MUNDT, G. HENRY, B.A., M.S., M.D., Assistant Professor, RMC and Attending, CMH**  
**NOOTENS, RAYMOND H., B.S., M.D., Instructor, RMC and Adjunct Attending, PSLH**  
**NOWICKI, NORBERT J., B.S., M.D., Assistant Professor, RMC and Associate Attending, PSLH**  
**PANTON, JOHN H., M.D., Associate, RMC and Attending, WSH**  
**PUSHKIN, EDWARD A., B.S., M.D., Emeritus Professor, RMC and Associate Attending, PSLH**  
**RADVILA, IZOLDA M., M.D., Instructor, RMC and Adjunct Attending, PSLH**  
**ROBBIN, DAVID S., B.S., M.D., Instructor, RMC and Assistant Attending, PSLH**



## Ophthalmology . . .

ROSENBERG, MICHAEL A., B.A., M.D., Assistant Professor, RMC and Consulting, PSLH  
SCHERIBEL, KARL, B.S., M.D., Emeritus Professor, RMC and Emeritus, PSLH  
SMITH, WARREN F., M.D., Assistant Professor, RMC and Attending, WSH

The Residency Training Program in Ophthalmology is approved by the Residency Review Committee of the Council on Education of the American Medical Association and by the American Board of Ophthalmology. Usually, applications are accepted from those who have completed a specially modified pre-ophthalmological internship of one year in the Department of General Surgery of Rush-Presbyterian-St. Luke's Medical Center. This first post-doctoral year is determined by the Matching Plan, followed by a residency in ophthalmology for three years depending upon satisfactory service. This training includes a full-time post-graduate course of three to five months elsewhere. Travel, tuition fees, allowance for books, and the regular resident stipend are provided by the hospital.

The teaching program is built around the initial examination, treatment, and follow-up of patients from the beginning of training rather than around a pyramidal system of graduated responsibilities ending in a final period of surgery. The rate of development of surgical technique by a resident depends on competence; extraocular procedures are

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SPIRO, BARBARA, M.D., Associate, RMC and Assistant Attending, PSLH  
TRESLEY, JACK, B.S., M.D., Instructor, RMC and Attending, MSHMC

performed soon after beginning the residency and intra-ocular procedures after twelve months. The average resident performs approximately 100 major procedures during the three years of training. Other responsibilities of the resident include consultations with other departments and the admission examination of private patients with active participation in any surgical procedures. Residents are assigned for 6-month rotations to groups of two or three attending ophthalmologists in order to develop better rapport and follow-up of patients.

Formal teaching rounds are devoted to a journal club, pathology, glaucoma, neuro-ophthalmology, motility, reports by staff or residents who have attended a scientific meeting elsewhere, and systematic coverage of important subjects that require additional emphasis, or the American Academy Course in Continuing Education. Grand Rounds in other departments are available if the subject is of ophthalmic interest. Although a research project is not required, each resident is urged to participate in either a clinical or laboratory project.

## Department of Orthopedic Surgery

GALANTE, JORGE O., M.D., Chairman  
ANDRIACCHI, THOMAS PETER, Ph.D., Assistant Professor, RMC and Assistant Scientist, PSLH  
BEYTSCHKO, TED B., B.S., Ph.D., Visiting Associate Professor, RMC  
CORZATT, RICHARD D., B.S., M.D., Assistant Professor, RMC  
COUDEN, TREVERT, B.A., M.D., Assistant Professor, RMC  
DeWALD, RONALD L., B.S., M.D., Professor, RMC and Senior Attending, PSLH  
FLYNN, JR., JOHN F., M.D., Instructor, RMC

GALANTE, JORGE O., B.A., M.D., D.M.Sc., Professor, RMC and Senior Attending, PSLH  
GILLIGAN, WILLIAM J., B.S., M.D., Assistant Professor, RMC  
GIRZADAS, DANIEL V., M.S., M.D., Associate Professor, RMC  
HARK, FRED W., M.D., Emeritus, RMC and Emeritus, PSLH  
HARK, WILLIAM A., B.A., M.D., Associate Professor, RMC and Associate Attending, PSLH  
HECK, CHARLES V., B.S., M.D., Clinical Professor, RMC and Consultant, PSLH

## Orthopedic Surgery . . .

HEJNA, WILLIAM F., B.A., M.D., Professor, RMC and Senior Attending, PSLH	REDONDO, LUIS G., B.Sc., M.D., Assistant Professor, RMC
HOWARD, FRANCIS M., B.A., M.D., Associate Professor, RMC and Associate Attending, PSLH	ROSTOKER, WILLIAM, B.S., M.S., Ph.D., Complemental Faculty and Visiting Professor, RMC
KAUSHAL, SATYA P., M.D., Instructor, RMC	SAVANAS, ALVINA, B.S., M.D., M.S., Assistant Professor, RMC
KUETTNER, KLAUS E., B.S., M.S., Ph.D., Associate Professor, RMC (also Biochemistry)	SCHENCK, ROBERT, B.S., M.D., Assistant Professor, RMC and Assistant Attending, PSLH (also Plastic and Reconstructive Surgery)
KUO, KEN, B.A., M.D., Assistant Professor, RMC and Assistant Attending, PSLH	SCHULTZ, ALBERT B., B.S., Ph.D., Visiting Professor, RMC
LAMBERT, CLAUDE N., A.B., M.S., M.D., Emeritus, RMC and Emeritus, PSLH	SHAPIRO, JULES, B.A., M.D., Assistant Professor, RMC and Assistant Attending, PSLH
LAMBUR, JAMES A. K., M.D., Assistant Professor, RMC	SHEINKOP, MITCHELL B., M.D., Assistant Professor, RMC and Assistant Attending, PSLH
McNEILL, THOMAS, B.A., M.D., Assistant Professor, RMC and Assistant Attending, PSLH	WILLANDER, DUANE A., B.S., M.D., Assistant Professor, RMC
ORTH, MICHAEL W., M.D., Assistant Professor, RMC	ZETTAS, PAUL, B.S., M.D., Assistant Professor, RMC
PYATI, PRAHLAD, M.B.B.S., M.S., Assistant Professor, RMC	

A four year approved residency program in orthopedic surgery is offered at the Medical Center. The trainees must complete, before entering the program, a year of core surgical internship in which training in general surgery, surgical intensive care, plastic surgery, neurosurgery, vascular surgery, and other surgical specialties is required. Coordinated rotations are offered in the four years of orthopedic training, including the orthopedic service at Christ Hospital and the Shriner's Hospital for Crippled Children in Chicago. Considerable opportunity for independent management of patients is provided at the senior resident level at Rush-Presbyterian-St. Luke's Medical Center and at Christ Hospital.

All of the patients admitted to the service are available for teaching. Clinical experience encompasses a broad scope of musculoskeletal problems, including spinal diseases, modern hip and knee surgery, surgery for arthritis, amputations, trauma, and pediatric orthopedics. Active teaching clinics also are conducted in the private out-patient offices located in the Professional Building.

The research facilities of the department include biochemistry laboratories, histology laboratories for hard tissue histology, tissue culture laboratories, and a laboratory for bioengineering studies. Two major programs are conducted in these facilities. A bioengineering program is conducted in conjunction with the Department of Materials Engineering at the University of Illinois, Chicago Circle Campus. Basic studies on total joint replacement, the mechanics of human locomotion, and the mechanics of the spine constitute the core of this program. The biochemistry program is geared toward the study of cartilage metabolism and ground substance. Resident participation in research is encouraged. A rotation is available at the second year level.

There is a seminar program in basic sciences, a regular review of the histopathology of the musculoskeletal system and anatomy, a dissection seminar, indication conference, and weekly teaching oriented seminars including Grand Rounds as well as research conferences. Pathology and clinical conferences are also conducted at Christ Hospital.

## Orthopedic Surgery . . .

### Department of Otolaryngology and Bronchoesophagology

The residency program is organized around the principle of progressively increasing responsibility with adequate supervision.

**CALDARELLI, DAVID D., M.D.,**  
Chairman  
**AIMI, KENJI, M.D.,** Associate Professor,  
RMC and Associate Attending, PSLH  
**ANDREWS, ALBERT H., B.S., M.S.,**  
M.D., Professor, RMC and Senior  
Attending, PSLH  
**BAILEY, LARRY L., B.A., M.D.,**  
Instructor, RMC and Adjunct  
Attending, PSLH  
**BLOCK, LESLIE J., B.S., M.D.,**  
Instructor, RMC and Adjunct  
Attending, PSLH  
**BUCKINGHAM, RICHARD A., M.D.,**  
Lecturer, RMC  
**BULGER, RICHARD F., M.D.,**  
Instructor, RMC and Adjunct  
Attending, PSLH  
**CALDARELLI, DAVID D., M.S., M.D.,**  
Professor, RMC and Senior Attending,  
PSLH  
**COOMBS, ARTHUR J., M.D.,** Emeritus,  
RMC and Emeritus, PSLH  
**FRIEDBERG, STANTON A., A.B.,**  
M.D., Professor, RMC and Senior  
Attending, PSLH  
**GEROULIS, ANTHONY J., B.S., M.D.,**  
Instructor, RMC and Adjunct  
Attending, PSLH

The Department of Otolaryngology and Bronchoesophagology offers a four- or five-year post-M.D. training program approved by the American Board of Otolaryngology. The residency provides for three residents, one in each year of training.

The clinical aspects of resident training are based upon the principles of progressive clinical responsibility, with appropriate supervision in both surgical and out-patient responsibility. The senior resident assumes full responsibility for pre-operative, operative, and post-operative care of the majority of hospital admissions commensurate with ability and under the direct supervision of the full-time attending staff.

There is a separate clinical and surgical rotation for the first-year trainee at one of the network hospitals, in which the resident is afforded full clinical and surgical responsibility under the close

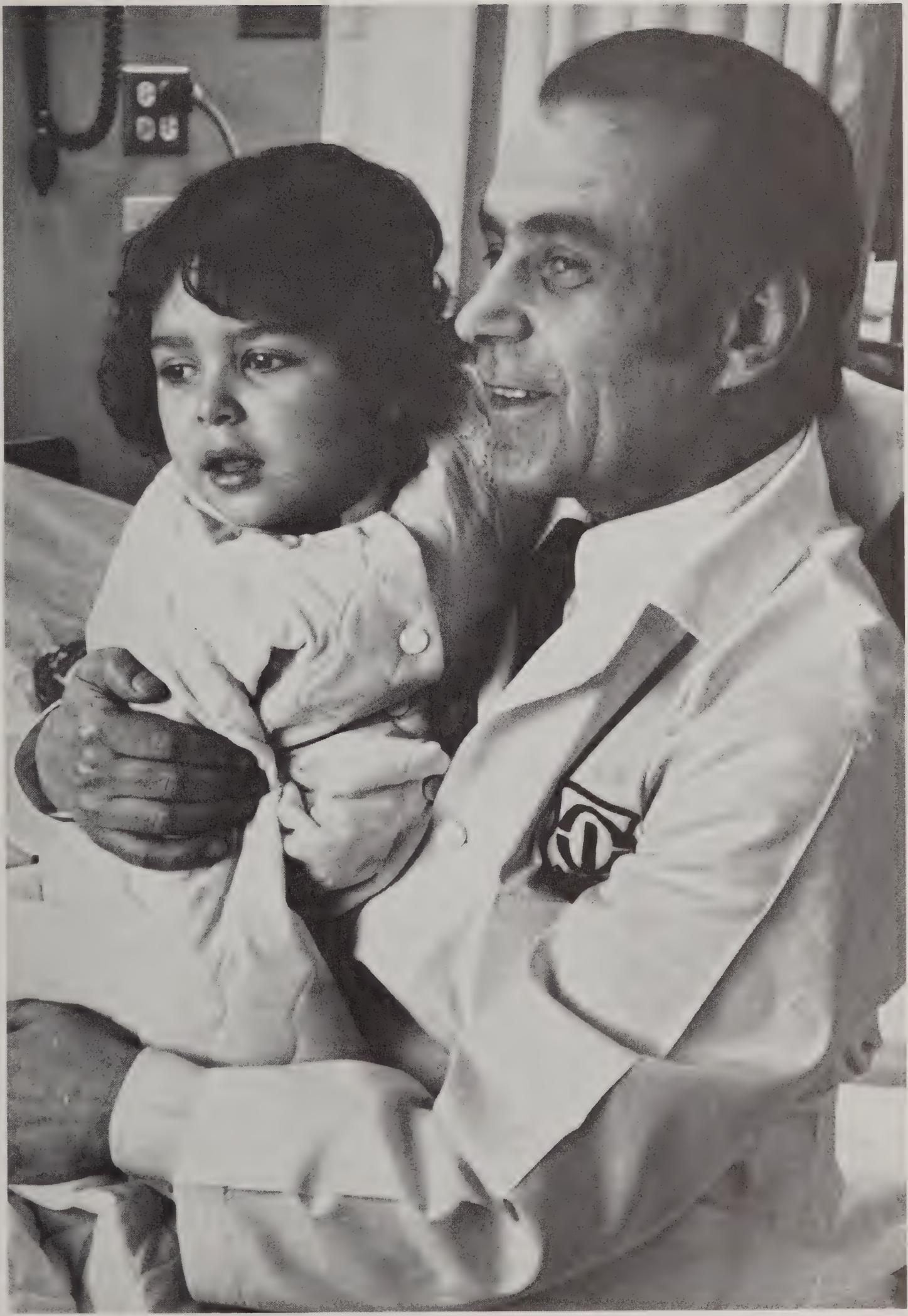
Inquiries concerning the program should be directed to the chairman of the department.

**GRIFFITH, THOMAS E., M.D.,**  
Assistant Professor and Complementary  
Faculty, RMC  
**HANNA, WAFIK A., M.B.B.Ch., M.D.,**  
Instructor, RMC and Adjunct  
Attending, PSLH  
**HOLINGER, LAUREN D., B.S., M.D.,**  
Assistant Professor, RMC and  
Assistant Attending, PSLH  
**HOLINGER, PAUL H., B.S., M.S., M.D.,**  
Professor, RMC and Senior Attending,  
PSLH  
**HORWITZ, IRWIN D., M.D.,** Professor,  
RMC and Associate Attending, PSLH  
**HUTCHINSON, JAMES C., M.D.,**  
Assistant Professor, RMC and  
Assistant Attending, PSLH  
**RATKO, ARTHUR L., M.D.,** Assistant  
Professor, RMC and Associate  
Attending, PSLH  
**RAZIM, EDWARD A., B.S., M.D.,**  
Assistant Professor, RMC and Associate  
Attending, PSLH  
**SCIARRETTA, S.A., M.D.,** Emeritus,  
RMC and Emeritus, PSLH  
**WALLNER, LINDEN J., B.S., M.D.,**  
Professor, RMC and Emeritus, PSLH

guidance of the network hospital otolaryngology program director.

Hospital admissions to this service average approximately 900 patients annually with an average daily census of 25, encompassing a great variety of otolaryngic conditions. An out-patient otolaryngology practice held each weekday averages approximately 5,000 patients per year, with the clinical teaching supervised daily by the full-time attending staff. There currently is an average of more than 1,400 surgical procedures, including microscopic otology, head and neck oncology, craniofacial anomaly, maxillofacial trauma, facial reconstructive, and endoscopic procedures, which provide extensive surgical experience in the various disciplines of contemporary otolaryngology.

Departmental conference activities include weekly seminars in otology, surgical pathology, otolaryngic radiology, head and neck oncology, otolaryngic



## Otolaryngology and Broncho- esophagology ...

pathophysiology, audiology, and electronystagmography. In addition, there is a formal course in head and neck surgical anatomy and temporal bone microsurgical dissections held weekly under the supervision of the attending staff.

Resident exposure to basic laboratory or clinical research is provided and currently involves assessment of chronic middle ear disease, airway problems in association with craniofacial anomalies, and the cytologic aspects of head and neck tumors. The resident staff is encouraged to submit papers for presentation at local and national society meetings, and each resident is afforded the opportunity of attending a national meeting or post-graduate medical education course each year under the department's sponsorship.

The department is a full-time participant in the Health, Education and Welfare National

Cancer Institute's Comprehensive Network Demonstration Project for Head and Neck Cancer, in cooperation with Northwestern University and the University of Illinois.

An extensive relationship with the Center for Craniofacial Anomalies at the University of Illinois Abraham Lincoln School of Medicine provides an opportunity for multidisciplinary management of patients with a wide variety of craniofacial malformations. Network relationships involving the Department of Otolaryngology and Bronchoesophagology include residency rotations and teaching activities at West Suburban Hospital and Mount Sinai Hospital. There is also a joint conference between the directors of otolaryngology at Mount Sinai Hospital and Rush-Presbyterian-St. Luke's Hospital.

## Section of Dental and Oral Surgery

### KELLEHER, LEON R., D.D.S., Acting Director

ADUSS, HOWARD, D.D.S., Professor, RMC and Senior Attending, PSLH (also Plastic and Reconstructive Surgery)  
ALDER, GARY F., D.D.S., Instructor, RMC and Adjunct Attending, PSLH  
BONICK, JAMES F., D.D.S., Assistant Professor, RMC and Assistant Attending, PSLH  
DITTMER, CEDRIC, D.D.S., Emeritus, RMC and Emeritus, PSLH  
FEIMER, PETER P., D.D.S., Instructor, RMC and Adjunct Attending, PSLH  
GOLD, HENRY O., D.D.S., Assistant Professor, RMC and Assistant Attending, PSLH (also Plastic and Reconstructive Surgery)

HOLMES, WILLIAM H., D.D.S., Associate Professor, RMC and Senior Attending, PSLH

KELLEHER, LEON R., B.S., D.D.S., Associate Professor, RMC and Associate Attending, PSLH

MARTINEZ, CHARLES R., D.D.S., Assistant Professor, RMC and Assistant Attending, PSLH

REED, DOUGLAS F., D.D.S., Instructor, RMC and Adjunct Attending, PSLH

SHEARON, KENNETH, D.D.S., Emeritus, RMC and Consultant, PSLH

WEISS, MARVIN, D.D.S., Associate Attending, PSLH

The Section of Dental and Oral Surgery includes four general dental residencies, all approved by the Council on Dental Education of the American Dental Association, which provide training in all aspects of dental practice within a hospital-based group practice setting. The resident, during at least half of the training year, serves as a member of the group; emphasis is placed on assisting trainees to understand the workings

of a hospital-affiliated group dental practice in which there are continuing interrelationships with physicians in various medical specialties. There is some degree of flexibility in the training program, which varies to a degree according to the individual resident's interests. There is a concentrated three-month program in anesthesiology, pain control, and intravenous sedation. Constant emphasis is placed on the medical

## *Dental and Oral Surgery . . .*

aspects of dental practice and on opportunities to learn the techniques of treating the dental problems of the handicapped, the aged, and the chronically ill. Each resident has experience in all aspects of oral surgery that might be encountered by a well-trained general practitioner. A significant amount of major oral surgery is done in the program.

Residents interested in community dentistry are given opportunities to participate in hospital-oriented outpatient programs and to treat bedbound patients away from the hospital environment.

The ultimate objectives of the program are to help the future general practitioner to function effectively in a total health care environment, with the emphasis on the dental and medical team.

## *Section of Communicative Disorders*

**WOLFE, VIRGINIA I., Ph.D., Director**  
BACON, MARY, B.S., M.A., Instructor, RMC  
**MEYER, DIANNE L., B.S., M.A.,**  
Assistant Professor, RMC and Assistant Scientist, PSLH  
**HARSCH, GAIL G., B.A., M.A.,**  
Instructor, RMC

The Section of Communicative Disorders functions as an integral part of the Department of Otolaryngology. Approximately 3,000 patients are seen each year for audiological testing; speech, language, and voice evaluations; and therapy. Teaching activities include seminars on topics related to basic and specialized aspects of speech pathology and audiology, such as tympanometry, electronystagmography, and spectrography, as well as aural and vocal

Many of the advantages of related hospital departments are available to the resident during training, including operating room and out-patient experience with general anesthesia, medical and other departmental ward rounds, clinical pathology and tumor conferences, and the care of pediatric and obstetric patients in a preventive dental capacity.

The dental staff includes representatives from dental specialty areas and dental hygiene. The dental program is conducted in a clinical facility which includes 17 dental chairs, a dental radiology department, a dental laboratory, recovery rooms, consultation rooms, and a conference room for meetings and training sessions.

RATUSNICK, DAVID, Ph.D., Assistant Professor, RMC and Assistant Scientist, PSLH  
**SCHEWITZ, SHEILA, M.S., Instructor,**  
RMC  
**WOLFE, VIRGINIA I., Ph.D., Associate Professor,** RMC and Associate Scientist, PSLH

rehabilitation. Because of the multidisciplinary nature of most communicative disorders, staff members are available for informal consultation on problems related to aphasia, stuttering, developmental language problems, etc. In addition to the educational and clinical interaction with house staff, supervised practica are provided to graduate speech and hearing students from Northern Illinois University.

## **Department of Plastic and Reconstructive Surgery**

**CURTIN, JOHN W., B.S., M.D.**  
Chairman  
**ADUSS, HOWARD, B.S., M.S., D.D.S.,**  
Professor, RMC and Senior Attending, PSLH (also Dental and Oral Surgery)  
**BADRI, A. ALLEN, M.D., Assistant Professor,** RMC, CMH  
**BRADLEY, CRAIG, B.A., M.D.,**  
Assistant Professor, RMC and Assistant Attending, PSLH

BRUECK, ROBERT J., A.B., M.D., Instructor, RMC and Adjunct Attending, PSLH  
**CURTIN, JOHN W., B.S., M.D.,**  
Professor, RMC and Senior Attending, PSLH  
**FELIX, E. ROBERT, A.B., M.D.,**  
Assistant Professor, RMC, WSH  
**GOLD, HENRY O., D.D.S., Assistant Professor,** RMC and Assistant Attending, PSLH (also Dental and Oral Surgery)

## Plastic and Reconstructive Surgery ...

GREELEY, PAUL W. A.B., M.D., Emeritus Professor, RMC and Consultant, PSLH  
HUGILL, JOHN V., M.D. Assistant Professor, RMC and Assistant Attending, PSLH  
KURTH, MILTON E., B.S., M.D., Assistant Professor, RMC, CH  
LOPEZ, ENRIQUE, M.D., Assistant Professor, RMC, WSH  
McNALLY, RANDALL, E., B.S., M.D., Associate Professor, RMC and Associate Attending, PSLH

The two-year graded training program in General Plastic and Reconstructive Surgery is fully accredited by the Tripartite Conference Committee on Graduate Training sponsored by the American Medical Association, the American College of Surgeons, and the American Board of Plastic Surgery. To be considered for appointment, the applicant must have completed a minimum of three years' acceptable training in general surgery in order to comply with the requirements of the American Board of Plastic Surgery. One resident is selected to start training each year on July 1. At present, an average of more than 1,200 plastic surgery patients are operated upon annually at this institution. Plastic surgery patients, embracing a wide variety of ages and types, may be private, or from the Mile Square Health Center. Bed privileges and special operative times are offered the residents, but all of the patients in the hospital are available for teaching purposes. The resident's case load comes from an active plastic surgery clinic supervised by the attending staff.

The residents will be trained in over-all preoperative surgical diagnosis and care, surgical treatment, and postoperative care of patients amenable to treatment by plastic surgery. There is more than adequate experience in the various methods of excisional and reparative surgery of the scalp, face, orbits, nose, oral cavity, neck, trunk, and extremities as well as experience in management of neoplasms of the head and neck, cosmetic surgery, facial trauma,

MONROE, CLARENCE W., B.S., M.D., Emeritus Professor, RMC and Emeritus, PSLH  
RANSDELL, ALLEN, B.A., M.D., Assistant Professor, RMC, CMH  
SCHENCK, ROBERT R., B.A., M.D., Assistant Professor, RMC and Assistant Attending, PSLH (also Orthopedic Surgery)  
SCHUETZ, JAMES E., B.A., M.D., Instructor, RMC and Adjunct Attending, PSLH

surgery of the hand, burns, and congenital abnormalities of the extremities and genitalia. Cooperation with other departments (orthopedics, general surgery, genitourinary, gynecology, bronchoesophagology, neurosurgery) allows exceptional experience in reconstruction of the esophagus, larynx, trachea, vagina, and abdomen and the repair of extensive encephalocele, myelomeningocele, and severe craniofacial deformities.

There is no routine rotation of plastic surgery residents to the network hospitals at this time; however, future plastic surgical residents (those who at present are on the General Surgical Service) do rotate to network hospitals for trauma, burns, and hand surgery. Plastic surgeons in the network hospitals are encouraged to attend and participate in the weekly Plastic Surgical Grand Rounds at the parent institution.

Residents are given ample opportunity to perform major procedures under the supervision of the attending staff. Increasing ability brings increased responsibility. To help the resident acquire skill and judgment in all phases of work, emphasis is placed on personal instruction at the bedside, in the clinic, in the operating room, and in the pathology and anatomy laboratories. Active participation in research is mandatory. The program stresses participation in weekly pathological conferences, plastic surgical and general surgical grand rounds, tumor conferences, surgical research projects, hand seminars, and journal reviews. The resident also spends



## **Plastic and Reconstructive Surgery ...**

time each week in private offices of the attending staff.

There is a separate Hand Clinic where acute and extensive reconstructive hand surgery cases are seen and operated upon. A large case load of cleft lip, cleft palate, and severe craniofacial anomalies are operated upon by the plastic surgical staff and residents at Presbyterian-St. Luke's Hospital, and there is a close relationship with the Center for Craniofacial Anomalies at the University of

Illinois School of Medicine, where more than 1,600 cases are seen each year.

Both junior and senior residents are afforded the opportunity to attend major surgical meetings during the year. They are encouraged to present papers on their own or in conjunction with the attending staff. A resident will be given an appointment as instructor in the department for the entire training program.

## **Department of Urology**

**McKIEL, JR., CHARLES, M.D.,  
Chairman**

**BAUMGARTNER, GEORGE C., M.D.,  
Instructor, RMC and Adjunct Attending,  
PSLH**

**CALLAHAN, DANIEL H., B.S., M.D.,  
Associate Professor, RMC and Senior  
Attending, PSLH**

**COTTRELL, THOMAS L., B.S., M.D.,  
Visiting Assistant Professor, RMC  
and Consultant, PSLH**

**EKBAL, SHAHID S., M.B.B.S.,  
Instructor, RMC and Assistant  
Attending, PSLH**

**FLANAGAN, MALACHI J., M.D.  
Professor, RMC and Senior Attending,  
PSLH**

**GOTTESMAN, JAMES E., B.S., M.D.,  
Instructor, RMC and Adjunct Attending,  
PSLH**

**GRAF, EDWIN C., B.S., M.D.,  
Professor, RMC and Senior Attending,  
PSLH**

**GUINAN, PATRICK D., B.S., M.D.,  
Assistant Professor, RMC and Assistant  
Attending, PSLH**

**HEINEMANN, THEODORE P., B.A.,  
M.D., Instructor, RMC and Adjunct  
Attending, PSLH**

**MALVAR, THOMAS C., M.D.,  
Associate, Complemental Faculty, RMC  
and Adjunct Attending, PSLH**

**McKIEL, JR., CHARLES F., A.B., M.D.,  
Professor, RMC and Senior Attending,  
PSLH**

**MERRICKS, JAMES W., B.A., B.S.,  
M.D., Emeritus, RMC and Emeritus,  
PSLH**

**PAPIERNIAK, FRANK B., B.A., M.D.,  
Associate Professor, RMC and Senior  
Attending, PSLH**

**SADOUGHI, NADER, M.D., Associate  
Professor, RMC**

**VALENTA, JAMES C., M.D., Associate  
Professor, RMC and Senior Attending,  
PSLH**

The Department of Urology in Rush Medical College offers a five year residency program in cooperation with Presbyterian-St. Luke's Hospital, Mount Sinai Hospital, Cook County Hospital and Children's Memorial Hospital.

The first two years which are the equivalent of the internship and the first year of general surgery are devoted to Nephrology, Oncology, Radiology, Infectious Diseases, General Surgery, Renal Transplantation or other specially requested programs that are approved by the residency chairman. The remaining three years are spent in rotations among the hospitals mentioned to provide varied patient material and pro-

gressive responsibility.

The first two years are spent in the departments of specialization and in general surgery and the resident is under the direction of the department through which he is rotating. This allows him to have a firm foundation when he arrives at the clinical years beginning in his third year of residency.

During the third year, the first spent in urology, the candidate is instructed in the performance of cystoscopy and the various special diagnostic techniques that are the backbone of the specialty and gains wide experience in urologic surgery, usually as first or second assistant. The third year resident has wide and primary responsi-

## Urology . . .

bilities in patient care but is encouraged to conduct some research in association with a member of the staff in the urology research laboratory. Such research may be continued in future years.

The fourth year resident is in charge of the private inpatient service at Presbyterian-St. Luke's Hospital for a four month period and then rotates to Cook County Hospital for a four month period where he has appropriate responsibility for his ward and finally a four month rotation at Mount Sinai Hospital with a mixture of private and clinic patients. During the fourth year the resident performs major urologic surgery under close supervision and begins his transurethral experience at the Cook County Hospital.

The fifth year resident or senior resident assumes complete responsibility for the urologic care in the institution through which he is rotating. The senior resident is also in charge of all conferences and delegates responsibility for education, patient care and research as he sees fit. Although attending urologists are always available for counsel and assistance the senior resident is encouraged to pursue a vigorous and self-reliant course of patient care and teaching.

All residents are required to attend the two hour weekly teaching conference held at the Rush Medical College. Individual conferences are held at every institution and the resident is required to participate and attend those confer-

ences in the institution through which he is rotating. The rotation in pediatric urology is available at the Childrens Memorial Hospital and at the Cook County Pediatric Hospital. These three month rotations are generally available in the fourth residency year. All residents are invited to the Chicago Urologic Society Meetings held regularly during the winter months.

All residency inquiries should be directed to the Chairman, Department of Urology, Rush Medical College.

The Journal Club meets twice a month. At one session, articles of interest in the current Journal of Urology are reviewed and discussed. At other sessions, one assigned topic is discussed in detail and three or four particularly stimulating articles are discussed at some length. A member of the attending staff acts as moderator.

All residents on the Urology Service are expected to attend weekly surgical grand rounds and any of the other teaching conferences offered at the hospital that may be of interest, such as the informal course in surgical physiology held on Saturdays.

Out-of-town speakers are regularly invited to give special rounds. These may deal with new research, new surgical or diagnostic techniques, or new concepts in treatment.

The resident also is required to participate in regular meetings of the Chicago Urological Society.

## Department of Diagnostic Radiology

**BUENGER, RICHARD E., M.D.,**  
Chairman  
**ADLER, YOLANDA T., M.D., Associate**  
Professor, RMC and Associate  
Attending, PSLH  
**ALCORN, FRANKLIN S., B.A., M.D.,**  
Professor, RMC and Senior Attending,  
PSLH  
**BOGDONOFF, MAURICE L., B.S.,**  
M.D., Professor, RMC and Senior  
Attending, PSLH (also Internal  
Medicine)  
**BUENGER, RICHARD E., B.S., B.M.,**  
M.D., Professor, RMC and Senior  
Attending, PSLH

**CHARTERS, JOHN R., B.S., M.D.,**  
Assistant Professor, RMC and Assistant  
Attending, PSLH  
**CHILCOTE, JR., WAYNE S., A.B.,**  
M.D., Assistant Professor, RMC and  
Assistant Attending, PSLH  
**CHUNG-BIN, ANTHONY, B.S., M.Sc.,**  
Associate Professor, RMC and Senior  
Scientist, PSLH (also Therapeutic  
Radiology)  
**CLARK, JOHN W., M.D., Professor,**  
RMC and Senior Attending, PSLH  
**FORDHAM, ERNEST W., B.S., M.D.,**  
Professor, RMC and Senior Attending,  
PSLH (also Nuclear Medicine)

## **Diagnostic Radiology . . .**

GARDNER, RICHARD, A.B., M.D., Assistant Professor, RMC and Associate Attending, PSLH	PATEL, SURESH K., M.B.B.S., Associate Professor, RMC and Senior Attending, PSLH
GARDNER, H. REX, B.A., M.D., Assistant Professor, RMC and Associate Attending, PSLH (also Pediatrics)	PETASNICK, JERRY P., B.A., M.S., M.D., Associate Professor, RMC and Senior Attending, PSLH
GRAINGER, LORNE S., M.D., Assistant Professor, RMC and Assistant Attending, PSLH	RAMSEY, RUTH G., B.S., M.D., Assistant Professor, RMC and Assistant Attending, PSLH
HILL, B. JAY, M.D., Visiting Professor, RMC and Consultant, PSLH	SILVER, BRUCE, B.S., M.D., Assistant Professor, RMC and Assistant Attending, PSLH
HUCKMAN, MICHAEL S., B.A., M.D., Associate Professor, RMC and Associate Attending, PSLH (also Neurological Sciences)	TURNER, DAVID A., B.A., M.D., Assistant Professor, RMC and Assistant Attending, PSLH (also Nuclear Medicine)
MATTHEW, GUY R., B.A., M.D., Associate Professor, RMC and Senior Attending, PSLH (also Internal Medicine)	

The Department of Diagnostic Radiology provides consultation for well over 130,000 patient examinations each year. The department, which encompasses a space of 27,500 square feet, is located on the main floor of the hospital and is divided, operationally and professionally, into eight sections. There is a full-time staff of 16 diagnostic radiologists, with a full-time director of each section. The other radiologists are assigned to individual sections, or rotate through several sections. All of the routine radiographic work is displayed daily on specially loaded viewing

devices within each subspecialty section for interpretation, consultation, and teaching. Special display areas are also located in the Emergency Room, Surgical Intensive Care Unit, Medical Intensive Care Unit, and in the portable examination operational center. Each day the responsible sections consult on material in these outposts as often as is necessary.

**Sections:** The responsibilities for various types of radiologic examinations are divided among the subspecialty sections:

phy, sialography, mammography, lymphangiography, peripheral arteriography, and abdominal arteriography (other than GU).

cardiovascular, abdominal, and obstetrical examinations by ultrasound echo techniques.

and body scanning devices and computer facilities to those sections offering consultation in Computed Tomography.

tomography, lung biopsy, angiography, coronary arteriography, thoracic aortography.

### *Section of General Radiology*

**PETASNICK, JERRY P., M.D., Director**

All examinations not specified under other sections, all emergency examinations, and the following special examinations: arthrogra-

### *Section of Ultrasound*

**CHILCOTE, JR., WAYNE S., M.D., Director**

Sectional imaging of the soft tissues of the body, including

### *Section of Computed Tomography*

**CLARK, JOHN W., M.D., Director**

Clinical and research responsibilities for assigning both brain

### *Section of Thoracic Radiology*

**BOGDONOFF, MAURICE L., M.D., Director**

Routine chest radiography and fluoroscopy, bronchography,



*Section of  
Gastrointestinal  
Radiology*

**GARDINER, RICHARD, M.D., Director**

Barium studies of the gastrointestinal tract, gallbladder, and biliary ducts, including T-Tube

and operative cholangiography, salpingography, and pneumogynecography.

*Section of  
Urologic Radiology*

**PATEL, SURESH K., M.B.B.S., Director**

Excretory urography, retrograde pyelography, arteriography and venography of the kidneys and

adrenals, renal cyst puncture, and voiding cystography (other than pediatric patients).

*Section of  
Pediatric Radiology*

**GARDNER, H. REX, M.D., Director**

All routine and special radiographic procedures on children,

with the exception of neuroradiologic and arteriographic studies.

*Section of  
Neuroradiology*

**HUCKMAN, MICHAEL S., M.D.,  
Director**

Plain skull radiography,

myelography, all head and neck arteriography and venography, ventriculography, and pneumoencephalography.

requiring manipulation of patients and all the flow of contrast materials, including bronchography, myelography, cholangiography, percutaneous biopsy.

The neuroradiological unit contains a somersaulting chair with tomographic and arteriographic capabilities for pneumoencephalography. A precision, multi-modular tomographic room is reserved for tomography of the temporal bone and other special areas of the body requiring more accuracy than the other departmental traditional laminographic equipment affords. A special section with three machines is devoted to computed tomography of the brain and body.

Additional equipment is located on the same floor with the operating rooms. In this area, fluoroscopic equipment is available for bronchography. One of the urographic rooms contains the most modern fluoroscopic filming and 77mm serial filming for retrograde pyelography, which is always performed under the direction of a radiologist. An adjacent cast room provides orthopedic radiologic services and consultation. Portable radiographic equipment for use throughout the hospital is

**Facilities**

Modern equipment made by major American and foreign manufacturers is provided for all of the standard radiographic examinations in 15 of the main departmental examining rooms. Some of these provide for general examinations and some of them are equipped for special procedures, such as magnification of radiography or examinations of particular areas of the body. A special room is equipped for mammography. Fluoroscopy of the gastrointestinal tract is performed in a suite of rooms. The examinations are remotely controlled, amplified, and televised with cineradiography. There are seven laminographic devices.

A recently constructed addition to the department houses the most sophisticated and up-to-date facilities for performing any of the most complicated special radiographic procedures. Three large rooms contain biplane serial filming of the highest technical capabilities for angiography. A remotely controlled, specially mounted, universally rotating table is equipped with a universally rotating fluoroscopic device. Cineradiography and tomography are immediately available for procedures on this machine

dispatched from this area. The films are processed and displayed in this area for rapid interpretation and ease of accessibility.

Coronary arteriography is routinely performed on special biplane 35 mm cineradiographic equipment located in the cardio-respiratory laboratory. These examinations are all performed by the Section of Cardiorespiratory Diseases, Department of Medicine.

#### **Training Programs:**

This department has been approved by the American Medical Association for residency training in straight diagnostic radiology. There are 20 residents in training, matching four residents annually through the NIRMP. Beginning with the first year, the resident staff is responsible for the interpretation of all radiography and performance of every special procedure in the department. Every film interpretation, however, is individually checked by an attending staff member of the appropriate section, and every special procedure is supervised throughout its duration by a specialty radiologist. Various degrees of responsibility are delegated during the training program. The first month is spent in a week-long assignment to each of the four major subspecialties: general radiology, gastrointestinal radiology, thoracic radiology, and urologic radiology. There are tri-weekly physics courses for radiation safety and protection and daily indoctrination in emergency film interpretation. In order to prepare the resident for night call rotation, which begins in the second month of training, the first-year residents take second call with senior residents during the indoctrination period. For the remainder of the year, second-year residents rotate monthly through these four subspecialty areas. During the second and third years correlative training will be given in the PSLH Department of Pathology and special assignments to the AFIP will be made.

During the second year, the residents rotate through each of the four major subspecialties for periods of six weeks and also spend six weeks each in pediatric radiology and neuroradiology. During this year, three months are spent in the Department of Nuclear Medicine to fulfill the requirements of the American Board of Radiology. Weekly laboratory courses in physics are given for most of the year, in addition to the 34 lecture hours of a regularly scheduled didactic radiation physics course. A special year-end refresher course in physics is given in preparation for the written examination by the American Board of Radiology. During the third and fourth years of training, two or more months are spent in each of the subspecialties.

Clinical clerkships of 8-12 weeks duration are offered to third- and fourth-year students in Rush Medical College and other Chicago medical schools. These students are assigned to the departmental sections, providing a great stimulus for on-the-job teaching for residents as well as attending staff. Specially prepared programmed teaching courses are routinely scheduled during the clerkship.

Within the department, and other departments in the institution, courses are offered each year in physics, basic radioactive isotope techniques, biostatistics and related mathematics, and the programming and medical usage of computers.

**Conferences:** There are daily conferences within each section for critical review of the day's work with the attending staff, residents, interns, and medical students. At all these sessions, material is selected for presentation at the section's weekly conference. Topics pertinent to this material are assigned to residents for study or review prior to the presentation.

Daily noon conferences are held in a special departmental conference room equipped with film



## *Neuroradiology . . .*

and slide display devices. Each section presents a conference once a week. Staff and house staff from other departments frequently attend these conferences, in which pathological material of interesting cases is coordinated.

Each week radiology grand rounds are held in the hospital's main auditorium. The radiology residents are assigned several of these hours each year for the formal presentation, with written manuscript and slide material, of any radiological topic of their choice. Preliminary advisory sessions on the selection of topics and methods of presenting the material are held with the department chairman and the subspecialty faculty members.

The department provides radiologic consultation at various hospital-wide conferences: medical grand rounds, surgical grand rounds, pediatric grand rounds, neurology grand rounds, tumor conference, and lymphoma conference. The material for these conferences is assigned for pre-review and presentation by one of the residents in the appropriate section who is supported at these conferences by an attending staff member.

Adjacent to the department library is a small photography room containing equipment for preparation of Polaroid prints and permanent slides for display of radiographic material at any of the hospital or departmental conferences.

All of the diagnostic radiology residents are urged to attend the

scientific meetings of the Chicago Roentgen Society, which are held six times a year. These include seminars in angiography, neuroradiology, pediatric radiology, nuclear medicine, and therapeutic radiology.

Time is made available for all of the residents to attend refresher courses at the annual convention of the Radiological Society of North America, which is held in Chicago every fall. Although travel expenses are not paid, those residents wishing to attend approved out-of-town seminars, conferences, and conventions may arrange for the time to do so.

**Teaching File:** Each section maintains its own collection of material for training of radiology residents, medical students, and student technologists, in the form of the original films (which correlate pathologic and autopsy reports) or as slide material for study.

All coding of interesting teaching or pathological material is done on a sectional basis.

A radiological library is maintained within the department proper. A complete collection of radiologic and para-radiologic textbooks, bound journals, and current radiologic journals is available in this library. There are facilities for study in the department, and this material does not leave the library. The library is also a reservoir for textual and slide material from previous radiology grand rounds presentations.

## **Department of Therapeutic Radiology**

**HENDRICKSON, FRANK R., M.D.,**  
Chairman  
**CHUNG-BIN, ANTHONY, B.S., M.Sc.,**  
Associate Professor, RMC and Senior  
Scientist, PSLH (also Diagnostic  
Radiology)  
**COX, RICHARD A.S., M.S., Ph.D.,**  
Assistant Professor, RMC and Associate  
Scientist, PSLH  
**ELKON, DAVID, M.D., Assistant**  
Professor, RMC and Assistant  
Attending, PSLH

**HENDRICKSON, FRANK R., B.A.,**  
M.D., Professor, RMC and Senior  
Attending, PSLH  
**KARTHA, PONNUNNI K.I., B.Sc.,**  
M.Sc., Associate Professor, RMC and  
Associate Scientist, PSLH  
**LEE, MYUNG-SOOK, M.D., Assistant**  
Professor, RMC and Associate  
Attending, PSLH  
**LIU, SHIN, Ph.D., Assistant Professor,**  
RMC and Assistant Scientist, PSLH  
**MURTHY, ANANTHA, M.D., Assistant**  
Professor, RMC and Assistant  
Attending, PSLH

## Therapeutic Radiology ...

PHILLIPS, RICHARD L., M.D., Visiting Associate Professor, RMC  
REDDY, SALITHA, M.D., Assistant Professor, RMC and Assistant Attending, PSLH  
ROUTH, ANUPAM, M.B.B.S., Assistant Professor, RMC and Assistant Attending, PSLH

SAXENA, VIRENDRA S., M.B.B.S., Associate Professor, RMC and Consultant, PSLH  
SILVERSTEIN, EDWARD, Ph.D., Assistant Professor, RMC and Associate Scientist, PSLH  
WACHTOR, THOMAS E., B.S., M.S., Assistant Professor, RMC

The department offers a three-year program leading to qualification for the American Board of Radiology examination in therapeutic radiology, with a fourth year of special training in therapeutic radiology and/or clinical use of radioactive isotopes for those desiring such augmentation of previous experience. Board eligibility requirements are three years of post-M.D. training in therapeutic radiology, and successful passing of a written examination. If successful on the written examination the oral examination is taken one year later.

The Radiotherapy Section consists of an integrated area of 6,500 square feet devoted to clinical problems and 1,000 square feet of research space. Within this area are two supervoltage teletherapy machines, one orthovoltage, one superficial treatment machine, and an image-amplified simulator to permit accurate localization of treatment volumes. The radium laboratory contains 750 mgms. of radium or isotope equivalent for clinical use. An electronics shop provides maintenance, design, and production of special equipment.

Rush-Presbyterian-St. Luke's Medical Center registers more than 1,600 new cancer patients a year and more than half receive some form of radiotherapy. There are more than 15,000 treatment visits and 2,000 follow-up visits a year. All patients are seen initially by the radiotherapy house staff, with preliminary evaluation and treatment planning before finalization of the treatment program with the attending staff. Patients are admitted directly to the radiology service and operating room priority is assigned for radiotherapeutic operating

procedures. Community hospitals within the Medical Center network permit rotation and exposure to the problems of community hospital practice.

There is an active clinical and basic research program in the areas of (1) preoperative radiotherapy, (2) combined chemotherapy and radiotherapy, and (3) optimum fractionation and protraction. The National Institutes of Health, the American Cancer Society, and local institutional funds provide financial support. Active participation in these programs by residents and fellows is strongly encouraged. Opportunities for independent investigation are available.

Medical students from Rush and other schools who rotate through the department offer stimulus as well as teaching challenge. In addition, interns from surgery have an elective one-month rotation into therapeutic radiology. The School of Radiation Therapy Technology offers still another teaching opportunity for motivated staff. The department presently rotates fellows and senior residents through one of the network hospitals for a 3-month rotation, and fellows/residents from other network hospitals can do a rotation in the department. The residents have rotations in Nuclear Medicine, Medical Oncology, and Medical Physics, and rotations on the services within the department as part of their training. House staff recruitment is basically to the Rush department with elective rotations to major radiotherapy departments within the network. The department is involved in joint conferences with Medical Oncology, Head and Neck, and sponsors a Weekly Radiation

## **Therapeutic Radiology ...**

Therapy Conference with guest speakers from in and outside the institution.

The training program is basically related to patient problems. Assignment of all new patients is made for evaluation and treatment planning. Plans for all new patients and any problem patients are reviewed daily with the entire attending and resident staff. Daily

treatment and follow-up is performed in conjunction with the attending staff. Adequate opportunity is present to ensure development of proficiency in all necessary external treatment and implant modalities. Approximately one-fourth of the training period is devoted to radium and isotope training.

## **Department of Anesthesiology**

**SADOVE, MAX S., Chairman**  
**ACUNA, ANTONIO, M.D., Assistant Professor, RMC and Assistant Attending, PSLH**  
**BADRINATH, SHYAMALA, M.D., Assistant Professor, RMC and Assistant Attending, PSLH**  
**BOGGS, ROY E., M.D., Associate Professor, RMC and Associate Attending, PSLH**  
**DJORDJEVICH, LJUBOMIR, Ph.D., Assistant Professor, RMC**  
**ECANOW, BERNARD, Ph.D., Visiting Professor, RMC (Complemental Faculty)**  
**EL-NAGGAR, MOUSTAFA, M.D., Associate Professor, RMC and Associate Attending, PSLH**  
**FORD, ERICA, M.D., Assistant Professor, RMC and Assistant Attending, PSLH**  
**GOTTSCHALK, WILLIAM, M.D., Professor, RMC and Senior Attending, PSLH (also Obstetrics and Gynecology)**  
**GUPTA, GARLA, M.D., Assistant Professor, RMC and Assistant Attending, PSLH**  
**HAN, KYUNG MIN, M.D., Instructor, RMC and Assistant Attending, PSLH**  
**HECKEL, EILEEN, M.D., Associate Professor, RMC and Senior Attending, PSLH**  
**HELLER, FLOYD, M.D., Associate Professor, RMC and Associate Attending, PSLH**

Anesthesiology is the study of normal function and how normal function is altered by a host of endogenous and exogenous factors, including but not limited to, pain, drugs, and trauma. In practice, the role of the anesthesiologist is that of the internist and intensivist. In our program a medical rather than a solely technical approach is followed through a system of graded responsibility and experience. This is accomplished through (1) training in clinical anesthesia, (2) didactic teaching, and (3) research.

**HIRSCHMANN, RICHARD, M.D., Assistant Professor, RMC and Assistant Attending, PSLH**  
**KEANE, DONAL, M.D., Assistant Professor, RMC and Associate Attending, PSLH**  
**KIM, SANG IK, M.D., Assistant Professor, RMC and Associate Attending, PSLH**  
**KOLINA, JOHN, M.D., Assistant Professor, RMC (Complemental Faculty)**  
**LAI, JOSEPH C., M.D., Assistant Professor, RMC and Assistant Attending, PSLH**  
**LYONS, MARY, M.D., Emeritus, RMC and Emeritus, PSLH**  
**MORCH, E. TRIER, M.D., Ph.D., Professor, RMC and Senior Attending, PSLH**  
**MURPHY, PETER, M.D., Associate Professor, RMC and Associate Attending, PSLH**  
**REDLIN, THOMAS A., M.D., Assistant Professor, RMC and Assistant Attending, PSLH**  
**SADOVE, MAX S., M.D., Professor, RMC and Senior Attending, PSLH**  
**SILINS, ASTRIDA, M.D., Assistant Professor, RMC and Assistant Attending, PSLH**  
**THOMASON, RICHARD, M.D., Assistant Professor, RMC and Associate Attending, PSLH**

The Anesthesiology Residency Program is a continuum of four years, designed to prepare interested medical graduates to be safe and competent anesthesiologists, to make them eligible for entry in the American Board of Anesthesiology Examination System, and to enable them to achieve full potential in exploring new horizons in the science and practice of anesthesiology.

The abundant, diverse, and complex clinical material performed by the 20 fully qualified and



## Anesthesiology . . .

nationally recognized attending staff in addition to faculty in other clinical and basic science departments and full-time researchers provides the trainees with quality clinical experience, didactic material, and research opportunity.

The resident staff is offered simultaneous progressive training in clinical anesthesiology, teaching, and education on a one-to-one basis. The program offers the 1st year resident a full year of rotation in other departments, including Medicine, Surgery, Obstetrics, and Pediatrics. The graduates design their own rotations according to their interests; thereafter, candidates spend two years rotating in the different sections of clinical anesthesiology. The fourth year is devoted to mastering skills in specialized areas of clinical anesthesiology and related subjects, conducting research or investigation in clinical or basic sciences, or acquiring in depth knowledge in methodology and basic sciences.

The didactic program provides a wide exposure to the required knowledge and includes daily anesthesia evaluation conference, weekly clinical anesthesia conference, weekly anesthesia symposia, weekly anesthesia grand rounds, and monthly anesthesia research seminars. In addition, staff members are required to attend the meetings, conferences, and symposia conducted by our department, the Illinois and Chicago Society of Anesthesiologists, and other related clinical and basic science departments of Rush.

The Department of Anesthesiology is divided into several

sections: General Surgery, Obstetrics, Cardiovascular Surgery, Chest Surgery, Neurosurgery, Orthopedic Surgery, Gynecology, Genitourinary Surgery, Endoscopy and ENT, Pediatric Surgery, Recovery and Intensive care, Pain Clinic, and the Section of Education and Research. Each section is headed by a nationally recognized faculty member. During rotation in each of these sections, the resident will be exposed to intense experience in the specialized area under the supervision of faculty members, who will discuss the salient features of the subject and familiarize the trainee with concurrent research and problems. Close relations between anesthesiology and other services have developed a team approach to patient care and the residents will find their surgical colleagues are most helpful in discussing various aspects of surgical management.

Residents rotate in the Section of Anesthesia Research, which deserves special mention. This section is currently engaged in an aggressive and ambitious program to improve patient monitoring systems through the use of sophisticated noninvasive methods. Towards that end, impedance cardiography and mass spectrometry are investigated from a totally new perspective with the computer as a central vector. In addition, research is intense in the areas of drug actions and interactions, and of the role of immunology in our practice; this we hope will disclose the mode of action of the anesthetic and other related agents.

## Department of Obstetrics and Gynecology

**WILBANKS, GEORGE D., M.D.,**  
The John M. Simpson Chairman  
of Obstetrics and Gynecology  
**ACHARYA, VASANT, M.B.B.S.,**  
Instructor, RMC and Assistant  
Attending, PSLH  
**ARCHIE, JULIAN T., B.A., M.D.,**  
M.P.H., Assistant Professor, RMC  
and Assistant Attending, PSLH  
**AXELROD, EDWARD H., B.S., M.D.,**  
Associate Professor, RMC and  
Associate, CH

**BAUM, HUGO C., B.S., M.D.,**  
Associate Professor, RMC and Senior  
Attending, PSLH  
**BEEBE, ROBERT A., B.S., M.D.,**  
Assistant Professor, RMC and Senior  
Attending, PSLH  
**BURKS, JAMES L., M.D., Associate**  
Professor, RMC and Associate  
Attending, PSLH  
**CAVA, JOSE M., B.S., M.D., Associate**  
Professor, RMC and Associate, CH

## Obstetrics and Gynecology . . .

- CEPEDA, ALBERTO, M.D., Associate, RMC and Adjunct Attending, PSLH  
EVENHOUSE, HENRY JOHN, A.B., M.D., Associate Professor, RMC and Associate, CH  
FARMANS, MICHAEL S., A.B., M.D., Assistant Professor, RMC and Assistant, CH  
FINOLA, GEORGE C., B.A., M.D., Associate Professor, RMC and Senior Attending, PSLH  
FOX, WILLIAM P., B.S., M.D., Assistant Professor, RMC and Assistant, WSH  
GEITTMAN, WILLIAM F., B.A., M.D., Associate Professor, RMC and Emeritus, PSLH  
GOTTSCHALK, WILLIAM, B.A., M.D., Professor, RMC and Senior Attending, PSLH (also Anesthesiology)  
ICHNIOWSKI, RICHARD, M.D., Associate Professor, RMC and Associate, CH  
JAGODZINSKI, BENJAMIN A., B.S., M.D., Associate Professor, RMC and Associate Attending, PSLH  
KHAN, NAJMA, M.D., Instructor, RMC and Adjunct Attending, PSLH  
LEE, ALICE W., M.D., Instructor, RMC and Adjunct Attending, PSLH  
LEE, ROBERT J., B.S., M.D., Assistant Professor, RMC and Assistant, CH  
LONG, JOHN S., B.S., M.D., Assistant Professor, RMC and Senior Attending, PSLH  
McCARTNEY, CHARLES P., B.S., M.D., Professor, RMC and Professor, CH  
MAROULIS, GEORGE V., B.S., M.D., Assistant Professor, RMC and Assistant Attending, PSLH  
MENGERT, WILLIAM F., M.D., Emeritus Professor, RMC and Emeritus, PSLH  
MERRICK, FRANK W., B.A., M.D., Assistant Professor, RMC and Assistant Attending, PSLH  
MLADINEO, JOHN P., B.S., M.D., Assistant Professor, RMC and Assistant Attending, PSLH  
NAMA, PRABHAVATHI, M.D., Associate, RMC and Adjunct Attending, PSLH  
NORTHROP, GRETAJO, B.S., Ph.D., M.D., Assistant Professor, RMC and Assistant Attending, PSLH (also Internal Medicine)  
OLSON, ROBERT P., A.B., M.S., M.D., Assistant Professor, RMC and Associate Attending, PSLH  
ORBAN, DENES, M.D., Associate Professor, RMC and Senior Attending, PSLH  
RUSSELL, JAMES L., B.S., M.D., Instructor, RMC and Adjunct Attending, PSLH  
SALAMONE, FRANK, B.S., M.D., Associate Professor, RMC and Associate, CH  
SAMPSON, ALAN B., B.S., M.D., Assistant Professor, RMC and Assistant, CMH  
SCHEWITZ, LIONEL J., M.B.C.H., Assistant Professor, RMC and Assistant Attending, PSLH  
SHEIKH, GHULAM N., M.D., Assistant Professor, RMC and Assistant Attending, PSLH  
SHERLINE, DONALD, B.S., M.D., Professor, RMC and Senior Attending, PSLH  
SKILES, JR., JAMES H., B.S., M.D., Assistant Professor, RMC and Assistant, WSH  
SMITH, FLORENCE, B.S., M.D., Associate Professor, RMC and Associate, CH  
SZYMANSKA, ZOFIA, M.B.B.S., Assistant Professor, RMC and Assistant Attending, PSLH  
TRUCHLY, VASIL, M.D., Assistant Professor, RMC and Senior Attending, PSLH  
VOYEVIDKA, IHOR, B.A., M.S., M.D., Assistant Professor, RMC and Assistant Attending, PSLH  
WILBANKS, GEORGE D., A.B., M.D., Professor, RMC and Senior Attending, PSLH  
WILHELM, EMANUAL C., B.S., M.D., Associate Professor, RMC and Associate, CH  
WOLFF, JOHN R., M.S., M.D., Professor, RMC and Senior Attending, PSLH  
ZELINGER, BERNARD B., B.S., M.D., Assistant Professor, RMC and Assistant, CH

The Department of Obstetrics and Gynecology offers a four-year post-medical school training program (approved by the American Board of Obstetrics and Gynecology) that emphasizes comprehensive experience in all phases of obstetrics and gynecology, as well as experience in internal medicine, neonatology, and obstetric and gynecologic pathology. The department prepares the

physician for the practice of general obstetrics and gynecology, for further subspecialty training, or for a career in academic obstetrics and gynecology. Elective time may be spent in clinical rotations or basic research programs in the Department of Obstetrics and Gynecology or in related specialties, depending on the interests of the individual resident. There are 7 positions at each year of the

## **Obstetrics and Gynecology ...**

program making a total of 28 residents. This is an integrated residency program with the residents rotating through Rush Medical Center's Obstetrics and Gynecology Department 75% of the time and to Christ Hospital 25% of the time. This integration provides the residents with experience at both a high risk tertiary medical center and a high quality private practice oriented service. No internship is required in order to begin the program, but those with prior internship may begin at the second year if positions are available.

All members of the attending staff are certified by the American Board of Obstetrics and Gynecology. They are actively engaged in the teaching programs for house staff and medical students. Residents at all levels are involved in student teaching activities with Rush Medical College.

Approximately 3,000 obstetric patients are delivered in the hospital each year. More than 1,600 surgical procedures are performed by the department each year. Because this department has been noted for pioneering in vaginal surgery, special emphasis is placed upon this area.

The residents are organized into two practice groups. Patients are assigned to each group and are seen on appointment by members of that group. This not only assures a continuity of patient care, but allows the physician to begin

training early for office practice. The senior residents of each group are given maximum responsibility for patient care, with attending physicians readily available for consultation and instruction. Teaching conferences are clinically oriented, with maximum resident participation.

The department has staff representing the major obstetric and gynecologic subspecialties: perinatal biology, endocrinology, oncology, community obstetrics and family planning, and psychosomatic obstetrics and gynecology. Each subspecialty is involved in interdisciplinary associations to broaden its patient care, teaching, and research objectives (e.g. the endocrinology service involves ob-gyn, medical, and pediatric endocrinologists), and there is maximum inter-department exchange and cooperation (e.g., between perinatal biology, endocrinology, and oncology, who use the same rhesus monkey colony as experimental models). Faculty with these diverse backgrounds, yet with a common interest in clinical obstetrics and gynecology, offers the resident depth in basic training and opportunity for specialized consultation and learning. Post-residency fellowships are currently offered in perinatal biology and others are being developed in each of the subspecialties in preparation for the subspecialty board requirements of the American Board of Obstetrics and Gynecology.

## *Section of Ambulatory Reproductive Health Care*

**BURKS, JAMES L., M.D., Director**

The Ambulatory Reproductive Health Care Section offers a wide range of experience in the ambulatory care of the obstetrical and/or gynecological patient. These experiences include routine health maintenance, prenatal care, cancer detection, venereal disease detection and treatment, family planning services, detection and treatment of sexual dysfunction problems, and treatment of appropriate gynecologic disease.

In the ambulatory setting, the resident has the opportunity to follow the obstetrical patient both prenatally and during the post-partum period, and, for those gynecological patients requiring surgery, to follow the patient both pre and post operatively.

A heavy emphasis is placed on preventative medicine and patient education.

A resident may elect, with consent of the director, to engage in programs to develop particular skills in this area.

*Section of  
Psychosomatic  
Obstetrics  
and Gynecology*

**WOLFF, JOHN R., M.D., Director**

Recognizing that the obstetrician-gynecologist is in reality the primary care provider of health care to his patients, the Section of Psychosomatic Obstetrics and Gynecology is organized to stimulate and encourage expertise in this area. A productive liaison exists with the Department of Psychiatry. Combined appointments have produced an interdisciplinary team of clinicians and a research group. Consultation concerning patients with psychomatic problems and/or unusual emotional difficulties is available to the staff at all times.

Medical students attend lectures in Phase II during the course in Human Reproduction. During the Phase III clerkships weekly seminars include patient interviews and discussion of the psychosocial aspects of illness, especially relating to the problems of depression, the reaction to gynecologic surgery, cancer, and sterilization. Patients seen in the Adolescent Family

Center and the Family Unit provide an insight into the varied aspects of health care and to the moral and ethical questions on a practical basis. Elective courses are offered to those who wish to pursue psychosomatic obstetrics and gynecology in more depth.

Residents have opportunity to acquaint themselves with the effect of the emotions on reproductive and gynecologic physiology, as well as the importance of social and economic factors in physical and mental health. The case method appears to serve as the optimum in teaching and experience.

The entire department is devoted to the principle of good patient care and to developing new systems for delivering this care to the community. Psychosomatic obstetrics and gynecology adheres to this by stimulating trainees to develop their own special interests and by providing opportunities for enhancing their understanding and expertise.

*Section of  
Perinatal Biology*

**SHERLINE, DONALD M., M.D.,  
Director**

The activities of in-patient and out-patient services are geared to providing the highest quality of total care possible. Whenever appropriate, patients who are believed to be at increased risk of an unsuccessful obstetric outcome are seen in specialty practices where consultative expertise is available to the patient in a multidiscipline setting that includes the obstetrician. Liberal use is made of similar in-patient services for those patients who cannot be managed adequately on an out-patient basis. Multiple weekly conferences and seminars

directed by attending staff provide ample opportunity to the resident staff and medical students to explore the clinical problems encountered, as well as to review the basic concepts of perinatal biology.

The resident also has the opportunity for in-depth studies of special problems of obstetrics in the Perinatal Biology Laboratory (formerly a division of the Department of Embryology of the Carnegie Institution of Washington). This laboratory is dedicated to the investigation of maternal and fetal physiologic and pathologic processes and utilizes the rhesus monkey as the experimental model.

*Section of Gynecologic  
Oncology*

**MLADINEO, JOHN, M.D., Director**

Gynecologic Oncology is an integral part of the combined oncology services, involving radiation therapy, medical oncology, surgical oncology, and pathology. There are

weekly tumor conferences and tumor clinics, along with day-to-day management by the resident staff of patients with gynecologic malignancies. Over 150 patients with various types of gynecologic malignancies are treated each year.



## *Gynecologic Oncology . . .*

All residents are involved in basic cancer patient care and may elect to pursue a clinical or basic project during their training period.

Several clinical research projects are in progress within the division and in cooperation with the nationwide Gynecologic Oncology Group, involving surgery, radiation therapy, or chemotherapy, or various combinations of two or more types of therapy. Evaluation of early cervical neoplastic lesions is made in a special clinic utilizing cytology, colposcopy, and colposcopy. More basic studies are being conducted concerning in

*vitro* carcinogenesis and cell differentiation.

The emphasis of this subspecialty is to train the resident and student to be adept at managing clinical problems in the diagnosis, therapy, and prevention of gynecologic malignancies. Intelligent management of clinical problems comes from a thorough understanding of the pathogenesis of the disease. The staff's interest is clinical, and basic research encourages a scientific approach to solving clinical problems.

## *Section of Gynecologic Endocrinology and Infertility*

### **MAROULIS, GEORGE, M.D., Director**

This section of the Department of Obstetrics and Gynecology is being developed and will function as follows:

(1) Laboratories that are able to assay protein and steroid hormone levels in excretory, secretory, or tissue amounts will be established, some in conjunction with the Medical Division Endocrinology Section Laboratories now existing. Clinical and research application of current methods of analysis will be used, for example, saturation analysis (competitive protein binding), radioimmunoassay, gas-liquid chromatography, chemical analysis, etc.

(2) Clinics and seminars devoted

to reproductive and gynecologic endocrine problems will be held in conjunction with other divisions of the hospital and medical school sharing mutual interest.

(3) The practical value and intellectual stimulation that evolve from these efforts will be available for medical students, residents, fellows, and staff at each level of development. The learning stimulus and mutually beneficial arrangement of this total program should aid the continued progress of both individuals and institution.

(4) Specific programs for residents and fellows will be arranged under the guidance of the faculty of the section.

## **Department of Pathology**

### **WEINSTEIN, RONALD, M.D., The Harriet Blair Borland Chairman of Pathology**

ALROY, JOSEPH, D.V.M., Assistant Professor, RMC and Assistant Scientist, PSLH

AYER, JOHN P., A.B., M.S., M.D., Professor, RMC and Senior Attending, PSLH

BHARATI, SAROJA, M.D., Associate Professor, RMC (Hektoen Institute)

BANNER, BARBARA, M.D., Assistant Professor, RMC and Assistant Attending, PSLH

CHANG LO, MARY, M.D., Assistant Professor, RMC, MSHMC

CLASEN, RAYMOND A., B.S., M.D., Associate Professor, RMC and Senior Attending, PSLH

COON, JOHN S., Ph.D., M.D., Assistant Professor, RMC and Assistant Attending, PSLH

DAINAUSKAS, JOHN R., M.D., Associate Professor, RMC and Associate Attending, PSLH

DAVIDSOHN, ISRAEL, M.D., Professor Emeritus, RMC, MSHMC

EISENBERG, BRENDA, Ph.D., Assistant Professor, RMC and Assistant Scientist, PSLH

FRESCO, RAUOL, M.D., Ph.D., Associate Professor, RMC, MSHMC

GOLDIN, MILTON, Ph.D., Associate Professor, RMC, MSHMC

GOULD, VICTOR, M.D., Professor, RMC and Senior Attending, PSLH

HASS, GEORGE M., B.S., M.D., The Otho S.A. Sprague Professor Emeritus, PSLH

## Pathology . . .

HAWKINS, EARL, M.D., Assistant Professor, RMC and Assistant Attending, PSLH  
HEREDIA, RAUL, B.S., Assistant Professor, RMC, MSHMC  
LEE, CHANG LING, M.D., Professor, RMC, MSHMC  
LEV, MAURICE, M.D., Distinguished Professor, RMC (Hektoen Institute)  
MASON, JOHN W., M.D., Assistant Professor, RMC, CH  
McQUAY, RUSSELL M., Ph.D., Associate Professor, RMC, MSHMC  
MILLER, ALEXANDER W., M.D., Associate Professor, RMC and Associate Attending, PSLH  
PAULI, BENDICHT, D.V.M., Assistant Professor, RMC and Assistant Scientist, PSLH

The principle underlying the program in pathology is to offer simultaneous progressive training in service functions, research, and teaching. It is believed that continuous divided attention to several subjects over a long period is preferable to concentrated attention to each subject in sequence over short periods. The program also offers to the first-year trainee or resident multiple choices as to how to use time. The long period of continuous exposure to multiple subjects, beginning with the first day of training, should lead the trainee or resident more quickly to a recognition of individual interests as well as to a development of a capacity for interpretation of diverse aspects of laboratory operations in daily hospital life. Current cases are analyzed in weekly tumor clinics; pathology staff conferences; hematology, autopsy pathology, surgical pathology, cytopathology, liver, renal, and clinical pathology conferences; and regular seminars on biochemistry, neuropathology, microbiology, and current research.

The Department of Pathology is divided into several sections. The principal patient service sections participating are autopsy pathology, surgical pathology, and cytopathology. About 450 autopsies are done each year; interns and residents perform about 70 autopsies each year. They are done thoroughly and with close

PELLETTIERE, EDMUND V., Assistant Professor, RMC and Associate Attending, PSLH  
RUBENSTONE, ALBERT I., M.D., Professor, RMC, MSHMC  
SCHWARTZ, MELVIN M., M.D., Assistant Professor, RMC and Assistant Attending, PSLH  
THACHENKARY, LEELAMMA, B.S., M.B.B.S., Associate, RMC, MSHMC  
THOMAS, WILLIAM JR., M.D., Associate Professor, RMC, MSHMC  
WEINSTEN, RONALD S., M.D., Professor, RMC and Senior Attending, PSLH

attending staff assistance through completion of the protocol for permanent binding.

The residents assigned to surgical pathology are responsible for examination of about 14,000 surgical specimens, which are studied grossly and microscopically under close attending staff supervision. They are also responsible, with attending staff consultation, for about 1,000 rapid frozen section diagnoses during surgical procedures each year.

About 13,000 cytopathology specimens are screened by staff cyto-technologists each year. Problems are submitted daily to residents for evaluation and then to the attending staff for final opinion.

During assignments to the Department of Biochemistry, house staff encounter instruments and procedures involved in practically every determination in clinical chemistry.

During assignments to the Department of Microbiology, almost every diagnostic procedure is encountered which has relevance to virology, serology, bacteriology, mycology, and parasitology. Emphasis in both rotations is upon laboratory operation rather than technical details, but there is considerable time for observation of skilled technicians at the bench.

During assignments to the Section of Hematology, residents routinely do bone marrow

## Pathology . . .

preparations and study blood smears. Other hematologic procedures in great variety and technical detail are carried out regularly in these laboratories. This is an especially valuable experience in correlation of clinical and laboratory findings. There is also an opportunity to learn the details of operation of a modern and very active blood bank. Residents also spend several weeks in the Division of Coagulation, where major time is spent in supervised interpretation of coagulograms. The assignment in immunology involves learning the techniques of immunology, especially as they are applied to the diagnosis or management of human disease.

For research training, the Division of Pathology has several well-equipped laboratories staffed by about 20 technicians and with more than 10,000 square feet of floor area. The animal laboratories house several hundred mice and rats. There are ancillary facilities, such as surgical operating rooms, x-ray rooms, and autopsy rooms. Special pathology research laboratories are designed and equipped for virology, histochemistry, electron microscopy, photomicrography, ultracentrifugation, tissue fractionation, visible and ultraviolet spectrophotometry, flame spectrophotometry, atomic absorption spectrophotometry, column and paper chromatography, high-voltage electrophoresis, tissue culture, amino acid chromatography, and gas chromatography. These laboratories and instruments are available to support research interests of the resident staff. The required technical assistance is equally available and is of great importance in the research training program, although research is not a required part of the program.

The first-year post-M.D. trainee program in pathology accepts two trainees who spend nine months on autopsies and surgical pathology. During this period, the trainee may select a research subject and begin investigative work under super-

vision of the attending staff. The trainee during the entire 12-month period attends the seminars and conferences involving case-oriented exercises designed to correlate the course of human disease with laboratory findings. The year is equivalent to one year of resident training for board certification.

The major part of the second and third years is devoted to both clinical and anatomic pathology. All descriptions and diagnoses of surgical specimens, after consultation with the pathology attending staff, are the responsibility of residents, who are also assigned responsibility for assisting first-year residents with gross post-mortem procedures and gross surgical pathology.

The resident is responsible for preparation and interpretation, with attending staff consultation, of frozen sections for rapid diagnosis during surgical procedures. The resident continues to attend all seminars and research previously undertaken is continued. If serious interest in research becomes apparent, technical assistance is assigned to facilitate the investigation and the resident assumes responsibility for direction of one or more research technicians.

The resident becomes more active in the teaching of pathology to medical students in the hospital. The resident will spend four months in the Department of Microbiology, learning diagnostic procedures in virology, bacteriology, mycology, and parasitology. Six months is spent in the Department of Biochemistry learning principles, instrumentation, and procedures related to clinical biochemistry. The resident continues attendance at all seminars and, if interested, continues research with the aid of technical assistants.

The residents also spend four months in the Department of Hematology, during which time they perform and interpret bone marrow aspirates and biopsies.

## **Pathology . . .**

They also attend hematology rounds. About two weeks is spent in the general hematology laboratory. One to two months is spent in blood bank and also in coagulation.

Assignment of three months in the Department of Immunology emphasizes clinical immunologic tests and the relations of immunology to clinical problems.

Two fellowship positions are available for persons who have specific research interests or who wish to add to their experience in surgical pathology and cytopathology by concern with daily diagnostic problems, supplemented by rotation on postmortem service in selected cases, attendance at all seminars (conducting those of special interest), and research and teaching, as in the fourth-year program. These activities allow the resident at least one-half of his or her time for research or further specialty training in accordance with individual choice. Excellent opportunities are available in cytopathology, electron microscopy, neuropathology, and various aspects of clinical pathology.

*Other types of training:* Residents who wish to be trained primarily or exclusively in special fields such as

clinical chemistry or hematology may make separate arrangements with the attending biochemists, hematologists, or others who will assume principal responsibility for their training, using such parts of the outlined program as seem desirable to complement their individual specialty programs. Residents who wish to be trained primarily for the practice of medicine or for careers in academic medicine are welcome in this program.

Student and other types of fellowships are available for those who do not follow the full schedule of formal resident training. Residents in the programs of the military services are welcome; many have been assigned here. Graduate students in one of the basic medical sciences may, when qualified, participate in this program.

The program is approved for training in anatomic and clinical pathology by the American Board of Pathology. Approval is given for the appointment and training of 10 post-doctoral residents. All residents upon completion of training have been qualified for examinations by the American Board of Pathology, and all have been certified following examination.



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(Orthopedic Surgery), Social Chairman

Bold lines indicate major  
entrance corridors of Hospital

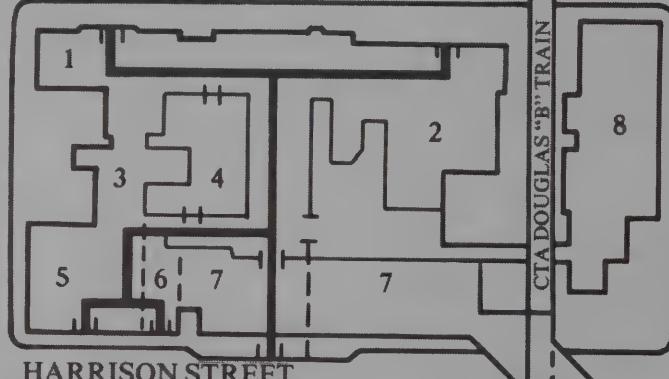
VAN BUREN STREET

EISENHOWER EXPRESSWAY (WEST BOUND)

CTA CONGRESS "A" TRAIN

EISENHOWER EXPRESSWAY (EAST BOUND)

CONGRESS PARKWAY



WOOD STREET

FLOURNOY STREET

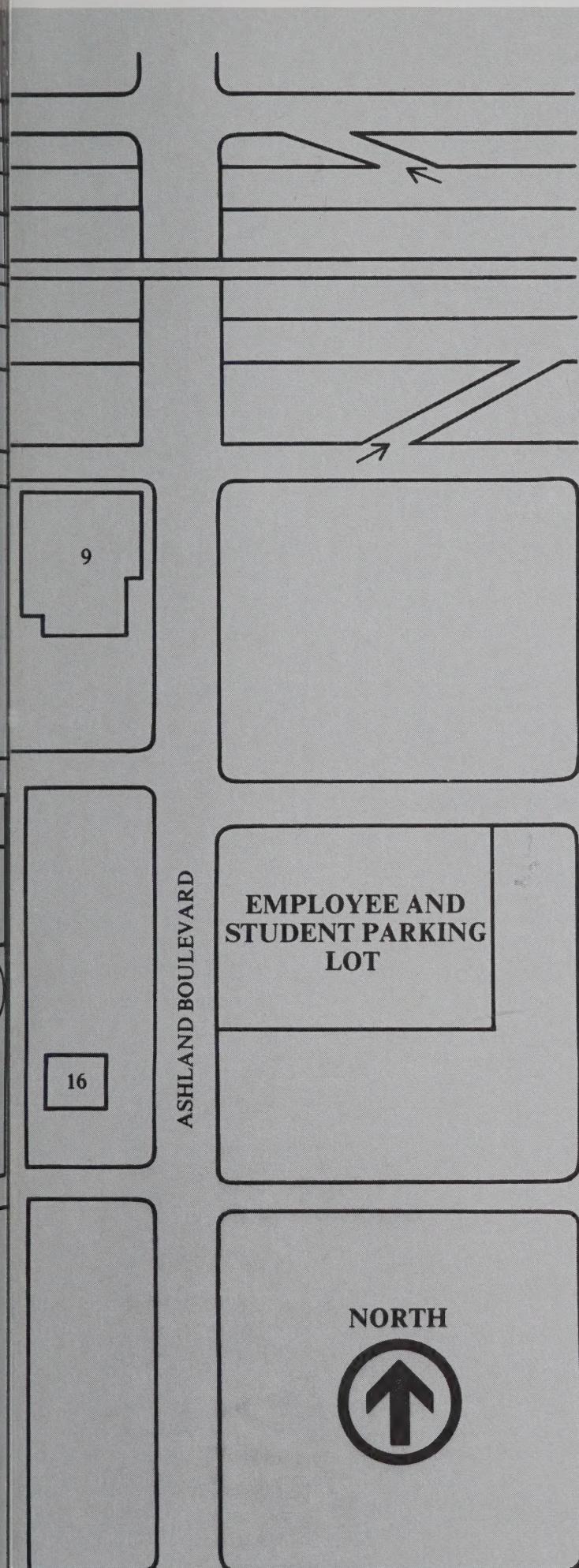
HERMITAGE AVENUE

CTA DOUGLAS "B" TRAIN

PARKING GARAGE

10

MARSHFIELD



**Rush-Presbyterian-St. Luke's  
Medical Center Campus**

1. Jones Pavilion
2. East Pavilion
3. Murdock
4. Cafeteria
5. Rawson
6. Senn
7. Jelke Southcenter
8. Coyne Building
9. Columbia Bank Note Building  
(Print Shop and Storage)
10. Parking Garage
11. Schweppé-Sprague Building
12. Professional Building
13. Academic Facility
14. Kidston Apartments
15. McCormick Apartments
16. Laurance Armour Day School
17. Marshall Field IV Mental Health Center
18. Johnston R. Bowman Health  
Center for the Elderly
19. Central Refrigeration Plant
20. Polk Street Station, CTA





